

MIT's
Oldest and Largest
Newspaper



WEATHER, p. 2

	TUE: 29°F 24°F
	WED: 32°F 18°F
	THU: 29°F 11°F

Snow
Snow/sleet.
Partly cloudy.

Volume 131, Number 1

tech.mit.edu

Tuesday, February 1, 2011

In Johnson, there's trouble a-Bruin



Nicholas D. Sisler '11 (MIT No. 2) plays in the MIT vs. Bruins Alumni game Saturday. The Bruins alumni won 11-9, and the proceeds of the game benefitted the Boston Bruins Foundation and the MIT Men's Ice Hockey Team.

ANDREW SWAYZE—THE TECH

Varsity cuts, 18 months afterwards

Reflections on the decision to cut eight sports

By Evan Moore
STAFF REPORTER

"It was the hardest decision I ever had to make in a leadership role."

Julie Soriero sits in her office on a bright Tuesday morning. As head of the MIT Department of Athletics, Physical Education, and Recreation (DAPER) for the past four years, she was heavily involved in the decision to cut eight varsity sports — Women's and Men's Gymnastics, Women's and Men's Hockey, Golf, Alpine Skiing, Wrestling, and Pistol — announced Thursday, April 23, 2009. The decision would help save DAPER nearly \$1.5 million, as part of an Institute-wide effort to cut budgets in the face of a deep recession. Now, eighteen months later, she muses over how upsetting the decision was at the time.

"It's the last thing any athletic director wants to do. You take a position as an athletic director to build programs, and help programs be successful. Your intent is to not cut them," she said.

Soriero speaks from experience. Coming to MIT in 2007 after nine years in Colorado College's athletic department, Soriero had fulfilled roles in all aspects of athletics, from Women's Basketball Coach to Athletic Director. She played field hockey, basketball, and lacrosse as an undergraduate at Pennsylvania State University. She's seen the highs and lows of being an athlete, and she knows how important sports are to students. Soriero knew what pain her decision would cause — she expected there to be a lot of emotions, and she was right.

Students reflect on disappointment, shock

Jillian R. Reddy '11 was a sophomore on the

Varsity cuts, Page 13

Looking in-depth at orientation plans

Students take a critical stance, but UAAP plans still not final

By Robert McQueen
NEWS EDITOR

Following the Undergraduate Association emergency meeting last week, several student groups have responded in an effort to preserve Residential Exploration (REX) during next year's orientation. While final changes to Orientation have not yet been confirmed, a reduced schedule could lead to timing conflicts, which could cut back on available time during the REX period. The final

scheduling decision rests with Chancellor Phillip L. Clay PhD '75, and will be made by mid-February, according to Julie B. Norman, Senior Associate Dean and Director of Undergraduate Academic and Advising Programming.

In response to the proposed changes to Orientation, incoming and outgoing members of the Dormitory Council (DormCon) convened to discuss how to address their concerns to Clay and Norman. The meeting resulted in a public letter addressed to Clay

that called for the restoration of a full-length REX and student inclusion in future administrative talks concerning Orientation.

Dean of Undergraduate Education Daniel E. Hastings PhD '80 also wrote a letter, but in response to last week's *Tech* article on REX. "Though we will look for ways to shorten the overall Orientation period, we do not plan to shorten the REX period in the coming year," Hastings wrote.

UA President Vrajesh Y. Modi '11 said that the UA does not cur-

rently have a stance on the UAAP's proposal to shorten Orientation. He added that the UA will have a better-defined

INSIDE
Timeline of Orientation since '98, p. 18
On Thursday, DormCon will hold its first meeting of the spring semester. DormCon President Christina R. Johnson '11 said

Orientation, Page 18

The Tech's Year in Review

History gives perspective. Knowing how things have changed over time can powerfully inform how things will be. At a time when MIT, and the world at large, is facing the continued pressure of a new financial reality, it helps to look back to understand how we got to where we are today.

Inside this issue is *The Tech*'s annual Year in Review insert, a collection of stories, columns, and photos about some of 2010's most important campus, national, and international events. No matter where you stand on the issues, we hope that this content serves as more than just a historical record. Use it for perspective — on the present and on the future.

IN SHORT

Want your voice heard about Orientation changes? Speak to your DormCon representatives at the DormCon meeting this Thursday at 5 p.m. in W20-450

The Chief Justice of Ghana is visiting MIT today and will be giving a talk at 5 p.m. in Building E51.

Several hundred people marched in Harvard Square yesterday to protest Egyptian President Hosni Mubarak's response to uprisings in that country.

More snow is on the way! Snow is expected today, followed by a wintry mix of snow, ice, and sleet tomorrow. See weather, p. 2.

Send news information and tips to news@tech.mit.edu.



Workers at the Auburn, MA MassWeb facility oversee the printing of *The Tech*. See more of how *The Tech* is made on page 11.

10 SITES YOU'VE NEVER HEARD OF

Digg died, and reddit's getting boring. Here's 10 other ways you can kill time on the Internet.

CAMPUS LIFE, p. 10

PRESIDENTS ON REX CHANGES

Dorm presidents chime in on the proposed REX changes. **OPINION, p. 4**

HOW DOES MIT MAKE POLICY?

Thinking from the admins' perspective has advantages. **OPINION, p. 5**



SEE HOW *THE TECH* GETS MADE

What goes in to actually printing *The Tech*? Check out photos from our trip to the printer.

NEWS, p. 11

BUCKY: THEATER FOR NERDS

R. Buckminster Fuller: The man behind buckyballs and fullerene, dramatized.

ARTS, p. 12

SECTIONS

World & Nation	2
Opinion	4
Fun Pages	7
Campus Life	9
Arts	12
Sports	20

Regulators tighten scrutiny of baby sleep products

Three years ago, Dr. Bradley Thach, a professor of pediatrics at Washington University in St. Louis, published findings that had the potential to upend nurseries across the nation, and perhaps save some lives too.

In reviewing data from the Consumer Products Safety Commission, Thach concluded that crib bumpers — the padding wrapped around the inside of a crib that often matches the bedding — were killing babies. In a 10-year period beginning in 1995, he found 27 suffocation deaths involving bumper pads, and he theorized that many more might have occurred because of inconsistencies in the data.

The Consumer Products Safety Commission initially ignored the findings. Last summer, it reached the same conclusion as a trade group representing product manufacturers, which asserted that other factors, like a crib crowded with pillows or babies sleeping on their stomachs, might have been a factor in those deaths, rather than the bumpers. As a result, most parents remained unaware of the debate over the safety of crib bumpers.

—Andrew Martin, *The New York Times*

New confusion surrounds plans for Ground Zero Islamic center

NEW YORK — Two weeks after the developer of a controversial Islamic center and mosque planned near ground zero distanced himself from the imam who co-founded the project, the imam has raised confusion over who is in charge by suggesting that he would move the center to a less contentious space if an opportunity arose.

The imam, Feisal Abdul Rauf, told the editorial board of *The Buffalo News* last week during a speaking tour in upstate New York that if someone offered another site, "I would move; I would move because my whole life is about improving relationships with people."

Sharif el-Gamal, the real estate investor who owns the property and co-founded the project, known as Park51, with Abdul Rauf in 2009, has insisted that he will build the community center and mosque as originally planned: at 51 Park Place in Lower Manhattan.

—Paul Vitello, *The New York Times*

Super Bowl advertisers try to score points, too

Most marketers that typically advertise in the Super Bowl sell brands with broad appeal and long histories, the better to resonate with the mass audiences that watch the game each year.

For instance, for Super Bowl XLV, to be broadcast by Fox on Sunday, the sponsor roster includes Chevrolet, which turns 100 this year; Coca-Cola, 125; Mercedes-Benz, also 125; and Stella Artois, a beer introduced in 1926 that traces its roots to 1366.

So what is Groupon, the purveyor of digital coupons that started in November 2008, doing in the game?

Groupon executives hope their commercial in the Super Bowl, along with spots before and after, will help build awareness for the brand. Groupon has hired Crispin Porter & Bogusky — the MDC Partners agency known for offbeat ads for marketers like Burger King and Domino's — to create the commercials.

"We decided it was time to expose this brand in a big way, on the biggest stage," said Rob Solomon, president and chief operating officer at Groupon in Chicago, referring to the Super Bowl's usually being the most-watched television show each year.

Expectations are high for Super Bowl commercials because the large audiences anticipate fresh, imaginative spots they have not seen before.

—Stuart Elliott, *The New York Times*

Egyptian army renounces use of force, officials offer talks

By David D. Kirkpatrick
THE NEW YORK TIMES

CAIRO — The government of Egypt's authoritarian president, Hosni Mubarak, shook Monday night, first as the Egyptian Army declared that it would not use force against protesters demanding his ouster, and then as Mubarak's most trusted adviser offered to talk with the political opposition.

The two statements, along with the damage to Egypt's economy, appeared to weaken Mubarak's grip on power just two weeks after a group of young political organizers posted an appeal on a Facebook page, calling for a day of protest in emulation of the revolution that pushed out another Arab strongman in Tunisia.

Hundreds of thousands have turned out into the streets over the last six days, and organizers called on millions of Egyptians to protest on Tuesday.

Within hours on Monday, the political landscape of the country shifted as decisively as it had at any moment in Mubarak's three decades in power. The military seemed to ag-

gressively assert itself as an arbiter between two irreconcilable forces: a popular uprising demanding Mubarak's fall and his tenacious refusal to relinquish power.

How far Mubarak is offering to bend in negotiations remains to be seen, and given the potential ambiguities of both statements it is too soon to write off the survival of his government.

The dramatic turn of events began at about 9 p.m. when a uniformed military spokesman declared on state television that "The armed forces will not resort to use of force against our great people." Addressing the throngs who took to the streets, he declared that the military understood "the legitimacy of your demands" and "affirms that freedom of expression through peaceful means is guaranteed to everybody."

A roar of celebration rose up immediately from the crowd of thousands of protesters still lingering in Tahrir, or Liberation, Square, where a television displayed the news. Opposition leaders argued that the phrase "the legitimacy of your demands" could only refer to the protests' cen-

tral request — Mubarak's departure to make way for free elections.

About an hour later, Omar Suleiman, Mubarak's right-hand man and newly named vice president, delivered another address, lasting just two minutes.

"I was assigned by the president today to contact all the political forces to start a dialogue about all the raised issues concerning constitutional and legislative reform," he said, "and to find a way to clearly identify the proposed amendments and specific timings for implementing them."

The protesters in the streets took Suleiman's speech as essentially a capitulation to the army's refusal to use force against them. "The army and the people want the collapse of the government," they chanted in celebration.

"The army is not a puppet in the hands of anybody," said Mahmoud Shokry, a former Egyptian diplomat and a friend of Suleiman. "It is not a puppet in the hands of Mubarak. It is not a puppet in the hands of Omar Suleiman. It is not a puppet in the hands of the defense secretary."

Pakistan's nuclear arsenal poses challenge to US policy

By David E. Sanger
and Eric Schmitt
THE NEW YORK TIMES

WASHINGTON — New U.S. intelligence assessments have concluded that Pakistan has steadily expanded its nuclear arsenal since President Barack Obama came to office, and that it is building the capability to surge ahead in the production of nuclear-weapons material, putting it on a path to overtake Britain as the world's fifth-largest nuclear weapons power.

For the Obama administration, the assessment poses a direct challenge to a central element of the president's national security strategy, the reduction of nuclear stockpiles around the world. Pakistan's determination to add considerably to its arsenal — mostly to deter India — has also become yet another irritant in its often testy relationship with Washington, particularly as Pakistan

seeks to block Obama's renewed efforts to negotiate a global treaty that would ban the production of new nuclear material.

The United States keeps its estimates of foreign nuclear weapons stockpiles secret, and Pakistan goes to great lengths to hide both the number and location of its weapons. It is particularly wary of the United States, which Pakistan's military fears has plans to seize the arsenal if it was judged to be at risk of falling into the hands of extremists. Such secrecy makes accurate estimates difficult.

But the most recent estimates, according to officials and outsiders familiar with the American assessments, suggest that the number of deployed weapons now ranges from the mid-90s to more than 110. When Obama came to office, his aides were told that the arsenal "was in the mid-to-high 70s," according to one official who had been briefed at the time, though estimates ranged

from 60 to 90.

"We've seen a consistent, constant buildup in their inventory, but it hasn't been a sudden rapid rise," a senior U.S. military official said. "We're very, very well aware of what they're doing."

White House officials share the assessment that the increase in actual weapons has been what one termed "slow and steady."

But the bigger worry is the production of nuclear materials. Based on the latest estimates of the International Panel on Fissile Materials, an outside group that estimates worldwide nuclear production, experts say Pakistan has now produced enough material for 40 to 100 additional weapons, including a new class of plutonium bombs. If those estimates are correct — and some government officials regard them as high — it would put Pakistan on a par with long-established nuclear powers.

WEATHER

Messy weather arrives (again)

By Roman Kowch
STAFF METEOROLOGIST

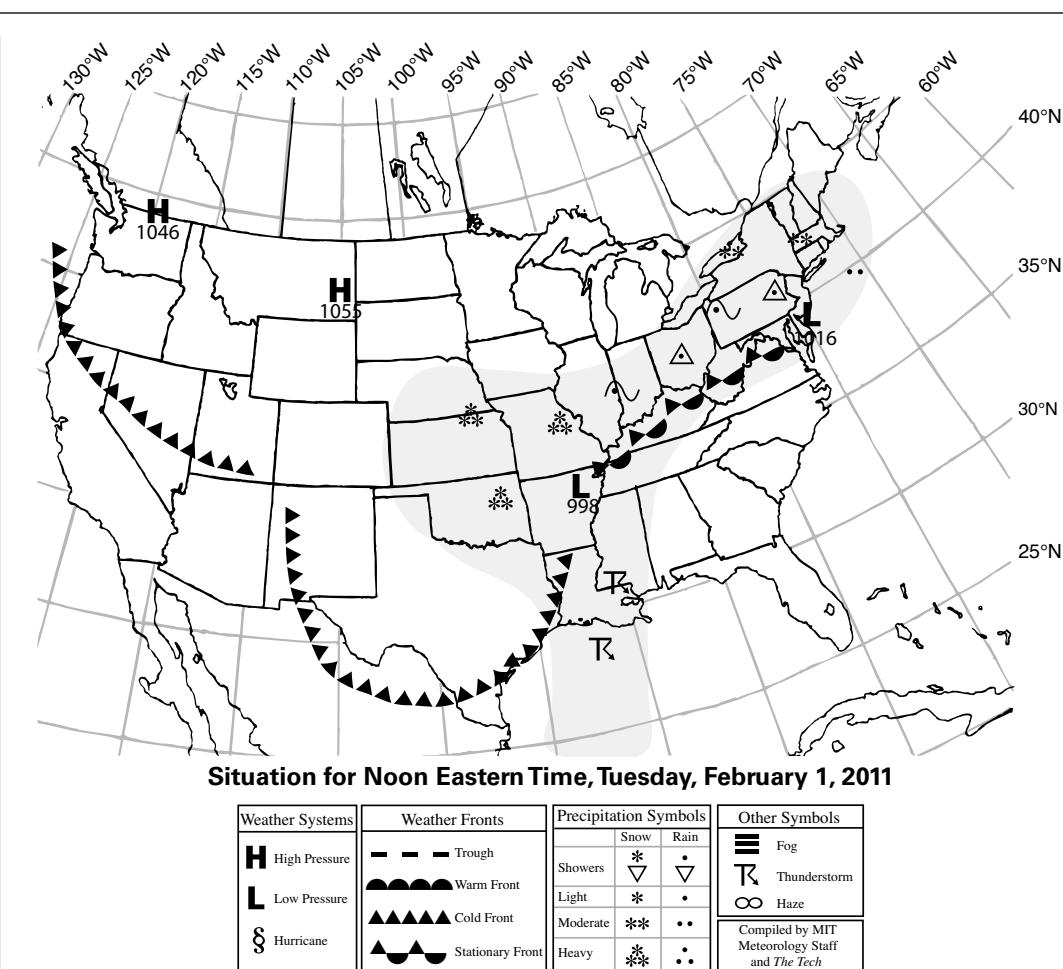
After a very stormy January for New England, yet another storm arrives just in time for February. A broad low pressure system, currently over the central Midwest as of noon, will meander its way across the eastern lower 48. Across the Great Plains and into the northern Midwest, snow, ice and strong winds will cause hazardous travel conditions for many of these areas. In only one day, this particular system will be making headlines in our region.

Looking closer to the Northeast, two primary events should surface through early

Thursday. New England should expect a batch of snow to arrive today and last through evening. After a short lull in the activity overnight, the Midwestern storm will move in by mid-day Wednesday, bringing a wintry mix of snow, ice, and sleet. As with any winter storm system, exact snowfall/sleet amounts can be difficult to pinpoint. Projections appear to agree on 20+ inches snowfall totals from extreme northern Mass. into New Hampshire/Maine, with 10-20 inches along the turnpike and toward the southern Mass. border. Totals should be just 6" into Rhode Island and the Cape. Cold conditions will prevail by Thursday and into the weekend.

Extended Forecast

Today: Snow through evening, around 6 inches. High 28°F (-2°C). NE wind at 15 mph.
Tonight: Cloudy. Snow/sleet arriving by daybreak. Low 23°F (-5°C). N wind at 15-20 mph.
Tomorrow: Snow/sleet. High 29°F (-2°C). NE wind at 20 mph, gusts to 30 mph.



Second judge strikes down Obama health care law

By Kevin Sack
THE NEW YORK TIMES

A second federal judge ruled Monday that it had been unconstitutional for Congress to enact a health care law that requires all Americans to obtain commercial insurance, evening the score at 2-2 in the lower courts as the conflicting opinions begin their path to the Supreme Court.

But unlike a Virginia judge in December, Judge Roger Vinson of the U.S. District Court in Pensacola, Fla., concluded the insurance requirement was so "inextricably bound" to other provisions of the Affordable Care Act that its unconstitutionality required the invalidation of the entire law.

"The act, like a defectively designed watch, needs to be redesigned and reconstructed by the watchmaker," Vinson wrote.

The judge declined to immediately enjoin, or suspend, the law pending appeals, a process that could last two years. But he wrote that the federal government should adhere to his declaratory judgment as the functional equivalent of an

injunction. That left confusion about how the ruling might be interpreted in the 26 states that are parties to the legal challenge.

The insurance requirement, known as the individual mandate, does not take effect until 2014. But many new regulations are already operating, such as a requirement that insurers cover children with pre-existing health conditions. States also are actively preparing for a major expansion of Medicaid eligibility and the introduction of health insurance exchanges in 2014.

David B. Rivkin Jr., a lawyer for the states, said the ruling relieves the plaintiff states of any obligation to comply with the health law. "With regard to all parties to this lawsuit, the statute is dead," Rivkin said.

But White House officials declared the opinion should not deter the ongoing rollout of the law. "Implementation would continue apace," a senior administration official said. "This is not the last word by any means."

At the same time, Stephanie Cutter, an assistant to the president, noted in a post on the White House blog

that the ruling had struck down the entire law. She called it "a plain case of judicial overreaching," and added: "The judge's decision puts all of the new benefits, cost savings and patient protections that were included in the law at risk."

The Justice Department, which represents the Obama administration in the health care litigation, said it was exploring legal options to clarify the uncertainty, including requesting a stay of the decision, either from Vinson himself or from the U.S. Court of Appeals for the 11th Circuit.

On Capitol Hill, Republicans sent out a stream of e-mail messages praising the ruling, while Sen. Richard Durbin, D-Ill., said he would convene a Judiciary Committee hearing on Wednesday to examine the constitutionality of the law.

In a 78-page opinion, Vinson held the insurance requirement exceeds the regulatory powers granted to Congress under the Commerce Clause of the Constitution. Vinson wrote that the provision could not be rescued by the clause that gives Congress broad authority to make laws "necessary and proper."

Afghan stoning video rekindles outcry in double murder case

By Rod Nordland
THE NEW YORK TIMES

KABUL, Afghanistan — Police officers investigating the double murder of a couple who were stoned to death in a prominent case five months ago could hardly have asked for more abundant evidence.

There were hundreds of witnesses. The date, time and place of the attack were well known, and so were the identities of the killers. The crime had even been captured on cell phone videos, and at least one of the recordings reached the authorities within days.

Now one of those videos showing the full horror of the killings has been broadcast on Afghan television to the shame of Afghan authorities, who have yet to make a single arrest in the deaths of the 19-year-old woman, Siddiqi, and her fiance, Khayyam, 25, who had tried to elope against their families' wishes.

The broadcast has suddenly prompted at least the appearance of action by the government. Over the weekend, a Ministry of Interior investigating commission arrived in Kunduz province, where the stoning was carried out by the Taliban in a village that has since come back under government control.

The police there admit that they now know the identities of the killers — so does nearly everyone in Kunduz province — but claim that the chief perpetrators have all gone into hiding. But that claim has been questioned because most of the males in the village, Mullah Quli, in the Archi District, took part in the Aug. 15 attack.

Outrage was expressed by many, including human rights groups and the governor of Kunduz province, and the stonings were condemned as both illegal and inhumane.

Only the Taliban, who controlled the village at the time, publicly condoned the killing of Sid-

diqa and Khayyam, who had a wife and two children.

Contrary to what many think, said Ahmad Nader Nadery of the Afghanistan Independent Human Rights Commission, the stoning of adulterers had not been a common practice in Afghanistan — until the Taliban era.

When it has taken place, it has been under strict religious supervision, after a fair trial, with limits set by religious scholars on the size of the stones — they must be small. The stone-throwers are prohibited from lifting their arms above the head to throw.

"It really saddened me to see this video," said Mollawi Abdullah, a religious elder from the Archi District. "It is right to stone people for doing such things, but stoning has its own rules and laws based on Shariah, and it is not to be done without a legitimate court, and it is not right to stone people unjustly with big, big stones."

Sotomayor reflects on advice, race and public perception at UChicago talk

By Adam Liptak
THE NEW YORK TIMES

CHICAGO — Justice Sonia Sotomayor, speaking at a law school here Monday, said she had "taken heat" at her Supreme Court confirmation hearings two summers ago in part because she was the first Hispanic nominee.

"People have views of me and expectations of me that are based on stereotypes," she said.

In her most candid and extensive public remarks since joining the court in 2009, Sotomayor reflected on the advice she had received from colleagues, her discomfort with becoming a celebrity and the role public opinion plays in judicial decision making.

She offered advice to lawyers who appear before the court and to students who want to serve as law clerks there. And she criticized Chief Justice John G. Roberts Jr., saying his approach to matters of racial justice was too simplistic.

She spoke for 90 minutes at the University of Chicago Law School, answering questions from professor David A. Strauss and from students. A recurring theme was that the public still did not know her very well.

"People mistake exuberance, passion and intensity for self-confidence," she said.

She was asked if she had a special responsibility in cases concerning race, gender and class.

"I do think I have a special role on the court," the justice responded, "but not in the way that you think."

She said that she welcomed becoming a role model and noted that there had been "a tremendous uptick" in the number of Hispanic groups visiting the Supreme Court. Meeting with them, she said, is "a priority for me."

But she added that her background did not affect her judicial work. "I don't come to the process as a woman of color, saying that I have to come to a decision that will help a specific group of people," she said.

On the other hand, she said she disagreed with Roberts' approach to cases concerning racial equality. In a 2007 opinion in a decision limiting the use of race to achieve public school integration, Roberts wrote that "the way to stop discrimination on the basis of race is to stop discriminating on the basis of race."

That approach, Sotomayor said, was "too simple."

"I don't borrow Chief Justice Roberts' description of what colorblindness is," she said. "Our society is too complex to use that kind of analysis."

That was, however, the sole suggestion of tension on the court. Much of the balance of Sotomayor's remarks sought to correct what she called the misimpression that there is animosity among the justices.

She also said the court did not take public opinion into account in its rulings. At the same time, she said, the court is seldom out of step with the public.

"On the vast majority of cases," she said, "I bet we're right with them."

Wary of Egyptian unrest, China censors internet access

BEIJING — In another era, China's leaders might have been content to let discussion of the protests in Egypt float around among private citizens, then fizzle out.

But challenges in recent years to authoritarian governments around the globe and violent uprisings in parts of China itself have made Chinese officials increasingly wary of leaving such talk unchecked, especially on the Internet, the medium some officials see as central to fanning the flames of unrest.

So the arbiters of speech sprang into action over the weekend. Sina.com and Netease.com — two of the nation's biggest online portals — blocked keyword searches of the word "Egypt," though the mass protests were being discussed on some Internet chat rooms on Monday. The use of "Egypt" has also been blocked on Weibo, the Chinese equivalent of Twitter.

The Chinese government has also tried to get out ahead of the discussion, framing the Egyptian protests in a few editorials and articles in state-controlled news publications as a chaotic affair that embodies the pitfalls of trying to plant democracy in countries that are not quite ready for it — a line China's leaders have long held.

Some Chinese news organizations have also seized on the ambivalent U.S. reaction to the Egyptian unrest to underscore the hypocrisy of the United States in sometimes backing dictators over democracy. *China Youth Daily* noted in an editorial on Sunday that "the increasing turmoil in Egypt is causing a 'headache' for the decision makers in Washington."

—Edward Wong and David Barboza, *The New York Times*

More states, governors take aim against teacher tenure

Channeling a national anxiety over poor student performance, many governors are taking aim at a bedrock tradition of public schools: teacher tenure.

The momentum began over a year ago with President Barack Obama's call to measure and reward effective teaching, a challenge he repeated in last week's State of the Union address.

Now several Republican governors have concluded that removing ineffective teachers requires undoing the century-old protections of tenure. Governors in Florida, Idaho, Indiana, Nevada and New Jersey have called for the elimination or dismantling of tenure. As state legislatures convene this winter, anti-tenure bills are being written in those and other states. Their chances of passing have risen because of crushing state budget deficits that have put teachers' unions on the defensive.

Teachers' unions have responded to the assault on the status quo by arguing all the ire directed at bad teachers distorts the issue.

"Why aren't governors standing up and saying, 'In our state, we'll devise a system where nobody will ever get into a classroom who isn't competent?'" said Dennis Van Roekel, president of the National Education Association.

—Trip Gabriel and Sam Dillon, *The New York Times*

WTO said to affirm that Boeing received improper subsidies

PARIS — A panel at the World Trade Organization ruled on Monday that the U.S. plane-maker Boeing received improper subsidies for its 787 Dreamliner and other jet models, giving it an unfair advantage against its European rival, Airbus, European officials said.

The confidential finding affirmed the WTO's interim findings released in September in response to a long-standing complaint by the EU over U.S. government support of Boeing, people briefed on the decision said.

The trade panel's ruling, which runs more than 1,000 pages, comes just weeks ahead of an expected decision by the Defense Department about a \$35 billion contract to supply the Air Force with new aerial refueling tankers.

Airbus said in a statement that it expected the final WTO report to say that Boeing would not have been able to start the Dreamliner project without illegal subsidies. But Boeing responded that it would have built the plane just as it did even without the subsidies.

European officials have expressed hope that the WTO's findings would undercut complaints by many U.S. lawmakers that Boeing is facing a subsidized rival in Airbus in that coveted contest.

—Nicola Clark and Christopher Drew, *The New York Times*

Where no business has gone before, with help from NASA

BOULDER, Colo. — Sitting in a testing facility at the University of Colorado, the inner shell of the Dream Chaser space plane looks like the fuselage of an old DC-3.

The test structure has been pushed and pulled to see how it holds up to the stresses and strains of spaceflight. With an additional infusion of money from NASA, the company that makes the Dream Chaser, Sierra Nevada Space Systems, hopes to complete the structure and take astronauts to orbit.

"Our view is if we could stop buying from the Russians, if we could make life cheaper for NASA, and if we could build a few vehicles that do other things in low-Earth orbit that are valuable, isn't that, at the end of the day, a good thing?" said Mark N. Sirangelo, the company's chairman.

The Dream Chaser is one of several new spacecraft that companies are hoping to launch into space with help from the government. Last year, the Obama administration pushed through an ambitious transformation for NASA: turning to the commercial sector for astronaut transportation.

So far, most of the attention in this new commercial space race has focused on Boeing and Space Exploration Technologies Corp. — SpaceX, for short — a brash upstart that gained credibility last year with two launches of its Falcon 9 rocket.

—Kenneth Chang, *The New York Times*

WORLD & NATION



Chairman
Joseph Maurer '12
Editor in Chief
Ethan A. Solomon '12
Business Manager
Greg Steinbrecher '12
Managing Editor
Connor Kirschbaum '13
Executive Editor
Aislyn Schalck '13

NEWS STAFF

News and Features Director: Pearle Lipinski '12; **News Editors:** Elijah Jordan Turner '11, Jingyun Fan '12, Robert McQueen '12, Jessica J. Pourian '13; **Features Editor:** Ana Lyons '12; **Staff:** John A. Hawkinson '98, Vinayak Ranade '09, Arkajit Dey '11, Liz Tsai '11, Danielle Gorman '12, Ziwei Hao '12, Jiyeon Baek '13, Margaret Cunniff '13, Joy E. Lee '13, Divya Srinivasan '13, Aparna Sud '13, Anne Cai '14, Derek Chang '14, Deborah Chen '14, Stan Gill '14, Evan Moore '14, Isabella Wei '14, Leo Zhou '14; **Copy Editor:** Michelle E. Szucs '14; **Meteorologists:** Allison A. Wing G, Vince Agard '11, Roman Kowch '12.

PRODUCTION STAFF

Editors: Judy Hsiang '12, Sarah Ritter '14; **Associate Editor:** Divya Chhabra '13; **Staff:** Fareeha Safir '13, Ben S. Frank '14, Stephanie L. Ku '14; **Illustrators:** Monica Gallegos '11, Robin L. Dahan '12, Rachel Fong '12, Alison Malouf '12.

OPINION STAFF

Editors: Nina Sinatra '12, Ryan Normandin '13; **Staff:** Florence Gallez G, Ronan Killian McGovern G, Holly V. Moeller G, Alejandro Rogers B. G, Gary Shu G, Keith A. Yost G, Andy Liang '14, Nils Molina '14, Mike Veldman '14.

SPORTS STAFF

Editors: David Zhu '12, Shelley Ackerman '13; **Staff:** Michael Gerhardt '12, Zach Hynes '12, Nydia Ruleman '12, Carlos Greaves '13, Russell Spivak '13, Sarah Weir '14.

ARTS STAFF

Editors: Maggie Liu '12, Kathryn Dere '13; **Associate Editor:** Samuel Markson '12; **Staff:** Sudeep Agarwala G, Bogdan Fedele G, Joyce Kwan '10, Joanne Y. Shih '10, Philipp Diesinger '11, Tracy Kambara '11, Sun K. Kim '11, Jeff Z. Chen '12, Yü Linlin Huang '13, Emily Nardoni '13, Jenny Xie '13.

PHOTOGRAPHY STAFF

Editors: Jessica Liu '13, Sam Range '13; **Associate Editors:** Elijah Mena '13, Jessica L. Wass '14; **Staff:** David Chen G, Aviv Ovadya G, Sheng-Ying Aithne Pao G, Arthur Petron G, Melissa Renée Schumacher G, Scott Johnston '03, Biyeun Buczyk '10, Sarang Kulkarni '10, William Yee '10, Jasmine Florentine '11, Stephanie Lin '11, Michael Y. McCanna '11, Minh Phan '11, Yuanyu Chen '12, Jason Chiu '12, Nicholas Chornay '12, Rui Luo '12, Meng Heng Touch '12, Aditi Verma '12, Feng Wu '12, Arfa Ajazi '13, Elizabeth D'Arienzo '13, Sunny X. Long '13, Sean Tang '13, Logan P. Williams '13, Xuan Yang '13, Andrew Swayze.

CAMPUS LIFE STAFF

Editor: Joanna Kao '13; **Staff:** Christine Yu '11; **Cartoonists:** Emily Ruppel G, Michael Ciuffo '11, Letitia W. Li '11, Michael Benitez '12.

BUSINESS STAFF

Advertising Manager: Moya Chin '13; **Operations Manager:** Jennifer Fong '13; **Staff:** Mark Thompson '11, Wendy Cheng '13, Emmanuel Carrodeguas '14, Sarine Shahmirian '14.

TECHNOLOGY STAFF

Director: Quentin Smith G.

EDITORS AT LARGE

Contributing Editors: David M. Templeton '08, Jeff Guo '11, Steve Howland '11, Michael T. Lin '11, Natasha Plotkin '11, Maggie Lloyd '12; **Senior Editors:** Brian Hemond 'G, Charles Lin G, Satwiksai Seshasai G, Vibin Kundukulam '11, Sherry Yan '11.

ADVISORY BOARD

Karen Arenson '70, Paul E. Schindler, Jr. '74, V. Michael Bove '83, Barry S. Surman '84, Robert E. Malchman '85, Deborah A. Levinson '91, Jonathan E. D. Richmond PhD '91, Karen Kaplan '93, Saul Blumenthal '98, Frank Dabek '00, Daniel Ryan Bersak '02, Eric J. Cholankeril '02, Jordan Rubin '02, Nathan Collins SM '03, Keith J. Winstein '03, Akshay R. Patil '04, Tiffany Dohzen '06, Beckett W. Stern '06, Marissa Vogt '06, Andrew T. Lukmann '07, Zachary Ozer '07, Austin Chu '08, Michael McGraw-Herdeg '08, Omari Stephens '08, Marie Y. Thibault '08, Ricardo Ramirez '09, Nick Semenkovich '09, Angeline Wang '09, B. D. Colen.

PRODUCTION STAFF FOR THIS ISSUE

Editors: Joanna Kao '13, Connor Kirschbaum '13, Aislyn Schalck '13, Ben S. Frank '14, Stephanie L. Ku '14, Sarah Ritter '14; **Copy Editor:** Michelle E. Szucs '14.

The Tech (ISSN 0148-9607) is published on Tuesdays and Fridays during the academic year (except during MIT vacations), Wednesdays during January, and monthly during the summer by The Tech, Room W20-483, 84 Massachusetts Avenue, Cambridge, Mass. 02139. Subscriptions are \$50.00 per year (third class). **POSTMASTER:** Please send all address changes to our mailing address: The Tech, P.O. Box 397029, Cambridge, Mass. 02139-7029. **TELEPHONE:** Editorial: (617) 253-1541. Business: (617) 258-8324. Facsimile: (617) 258-8226. Advertising, subscription, and typesetting rates available. Entire contents © 2011 The Tech. Printed on recycled paper by Mass Web Printing Company.

OPEN LETTER

Dorm presidents defend REX

We have been told that the proposal to reduce the length of orientation has come down from your office, and so we as representatives of the student body are coming to you to ask that you amend the suggested changes to preserve the full length of Residence Exploration (REX).

We sincerely appreciate Dean Norman's actions in presenting this proposal to the student body and seeking our input in shaping the schedule of orientation, but we must register our profound dissatisfaction with the current proposal.

At MIT, our communities are what make us strong. Fraternities, sororities, independent living groups, and dormitories all have unique identities, and each living group creates an irreplaceable support network for its students. Our living groups include our mentors, our counselors, and our friends; we strongly believe that having a supportive community at home is essential to surviving life at MIT. REX is the time during which these communities are formed, rebuilt, and rejuvenated.

For freshmen, REX is an invaluable opportunity to meet other students and integrate into the social fabric of MIT. It is their time to explore, to discover, and to find the living group and the community that will make their time at MIT most successful. Even students who eventually move off-campus or to an FSILG benefit from the friendships they form during this period of exploration and from finding the right

place to spend their first few semesters.

The proposed plan will drastically cut down on the amount of time freshmen can spend on REX activities. While we were told that no REX events would be eliminated because of this, it is clear that by moving the end dates for FPOPs and the arrival dates for other students two days further into REX, there will be just one or two days during which freshmen can truly and productively explore their dorm options. This cannot possibly be considered enough time to find the right community. In 2006, the first recommendation of the UA Extended Report on Orientation was to "Place emphasis on Orientation events containing dynamic student-generated content." A better description of REX could not be found, and we stand by this recommendation.

The goals of REX are not the goals of CPW. The two periods serve completely different purposes for incoming freshmen, and to suggest that one may serve as a substitute for the other simply because both feature free food and living group-sponsored activities displays a startling lack of knowledge about the freshman experience. Furthermore, it is wrong to think that all students who attend MIT will come to CPW and vice-versa. CPW is a time for the entire community to advertise MIT as a whole and to help freshmen decide if the Institute is the right place for them to spend their next four years. To ask us to simultaneously represent MIT as a whole and as individual

living groups is unreasonable, and it is good neither for us nor for the Institute.

Finally, we must express our extreme disappointment with how this process has been handled so far. As with many critical student engagement issues in the past, we have been handed a proposal on which we have had no real input. Students are the largest stakeholders in orientation. A successful Orientation is critical to students' welfare during freshman year and throughout their time at MIT. However, we were the last to hear of these proposed changes.

On this, the 150th anniversary year of our Institute, we must act to preserve what makes us great. "Inventional Wisdom" should not consist of copying the mainstream policies of other universities. Rather, we should embrace the unconventionalities that make our students so extraordinary. We ask two things. First, we ask for the restoration of a full REX to the proposed schedule, as a critical part of our uniquely supportive housing system. Second, as we stand to gain or lose more than anyone else on the issue, we ask to be involved in any future discussions of orientation. We as the dorm presidents would be happy to meet with you to discuss ways to make REX and Orientation beneficial to all parties.

Editor's Note: This letter was addressed to Chancellor Phillip L. Clay PhD '75 and The Tech.

Signed,

Andy Wu,
Baker House Pres. 2010-2011

Daniel Sauza,
BC Pres. 2010-2011

Alexander Penn,
BC Pres. 2011-2012

Robin Deits,
EC Pres. 2010-2011

James Douberley,
EC Pres. 2011-2012

Meagan Roth, MacGregor
Pres. 2010-2011

Hannah Rice,
McCormick Pres. 2010

Krithika Shanmugasundaram,
McCormick Pres. 2011

Alec Lai,
Next House Pres. 2011

TyShaun Wynter,
New House Pres. 2011

Carolina Roque,
Phoenix Group Pres. 2010-2011

Rebecca Cox, Random Hall
Pres. 2011

Giulia Pantalone,
Senior House Pres. 2011

Christina Johnson,
Simmons Pres. 2010,
Dormcon Pres. 2010-2011

Zachary Hynes,
Simmons Pres. 2011

GUEST COLUMN

CPW is not a replacement for REX
More time to explore dorms means happier students

By Jacqueline Rogoff

What has been happening to MIT recently? It seems as though the "powers that be" are chipping away at all the things that I thought made life at MIT worth it. At this point, I doubt I'll recognize the place by my five-year reunion. I'll spare you all the rant about dining, but shortening REX to a single day is completely unacceptable.

First of all, CPW cannot replace the extra time for exploring dorms. I was lucky to be close enough to travel to MIT without my parents and already knowing I wanted to go there. Even so, I never actually made it over to one side of campus, let alone all of the dorms and living groups on the side where

I was. There simply wasn't enough time, with all the other activities put on by student groups, teams, academic presentations, etc. And there were plenty of other students who weren't even sure they wanted to go to MIT or who arrived with their parents — further hindering their freedom to dart around campus. Many students who will enroll at MIT aren't even able to attend CPW.

From the other side, having been through CPW four times, it would be a lot to ask of students for them to represent their dorms and scout next year's freshmen when they're not even sure who will show up as a freshman. I personally urged my prefrosh to attend events put on by student activities and go sit in on classes, and then

worry about where they will live in the fall. Plus, CPW is in the middle of term, with all of its problem sets, projects, and general exhaustion for students. It is not a time when we can chat with freshmen for hours on end about dorms.

Having made an i3 video for French House, I've realized how far some videos are from representing an entire dorm. When each dorm can comprise about ten different floors, halls, and entries, it is vital that freshmen get a chance to talk to residents. A video can give a first approximation for which dorm is a good fit, but discovering a niche and finding out if you click

REX, Page 6

CORRECTIONS

In last Wednesday's article about the Bad Ideas Competition, the sub-head incorrectly characterized an event as "frosh dog sledding." The dog sledding event was open to all participants, and students from all classes participated.

OPINION POLICY

Editorials are the official opinion of *The Tech*. They are written by the editorial board, which consists of Chairman Joseph Maurer, Editor in Chief Ethan A. Solomon, Managing Editor Connor Kirschbaum, Executive Editor Aislyn Schalck, Opinion Editors Nina Sinatra and Ryan Normandin, Contributing Editors David M. Templeton and Steve Howland, and Advisory Board member Andrew T. Luckmann.

Dissents are the signed opinions of editorial board members choosing to publish their disagreement with the editorial.

Letters to the editor, columns, and editorial cartoons are written by individuals and represent the opinion of the author, not necessarily that of the newspaper. Electronic submissions are encouraged and should be sent to letters@tech.mit.edu. Hard copy submissions should be addressed to The Tech, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters, columns, and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will

not be accepted. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority. Once submitted, all letters become property of *The Tech*, and will not be returned. Letters, columns, and cartoons may also be posted on *The Tech's* Web site and/or printed or published in any other format or medium now known or later that becomes known. *The Tech* makes no commitment to publish all the letters received.

Guest columns are opinion articles submitted by members of the MIT or local community.

TO REACH US

The Tech's telephone number is (617) 253-1541. E-mail is the easiest way to reach any member of our staff. If you are unsure whom to contact, send mail to general@tech.mit.edu, and it will be directed to the appropriate person. You can reach the editor in chief by e-mailing eic@tech.mit.edu. Please send press releases, requests for coverage, and information about errors that call for correction to news@tech.mit.edu. Letters to the editor should be sent to letters@tech.mit.edu. The Tech can be found on the World Wide Web at <http://tech.mit.edu>.

REX strengthens community bonds

REX, from Page 4

with a living group takes more than just a day, especially when time must be spent figuring out where all the dorms are and how to get to them. Considering that many freshman participate in FPOPs and ASEs, I can see many skipping out, because apparently dorms aren't important enough to devote more than a day to figure them out.

The administration claims this change is about making sure that freshmen are academically ready and not exhausted for class. Maybe my brain's getting foggy from old age, but isn't there half a week between when freshmen move and the start of classes? Maybe we do have "the longest orientation in the country," but so what? Since when is

MIT so concerned about fitting in with everyone else? Part of what I loved about this place was that we weren't all dumped into a freshman dorm like so many of my high school friends. In addition, we had so much freedom to choose where we got to live, that I began to feel like an adult and that the administration respected us enough to make our own decisions. Living with upperclassmen, especially ones I bonded with over a nice, relaxed REX period, made me more academically ready than any official orientation event I attended. They were a source of advice, especially when I was choosing my classes, and not only did they help me with my homework, but some became my best friends. I was happy to pass on the favor when I became one myself.

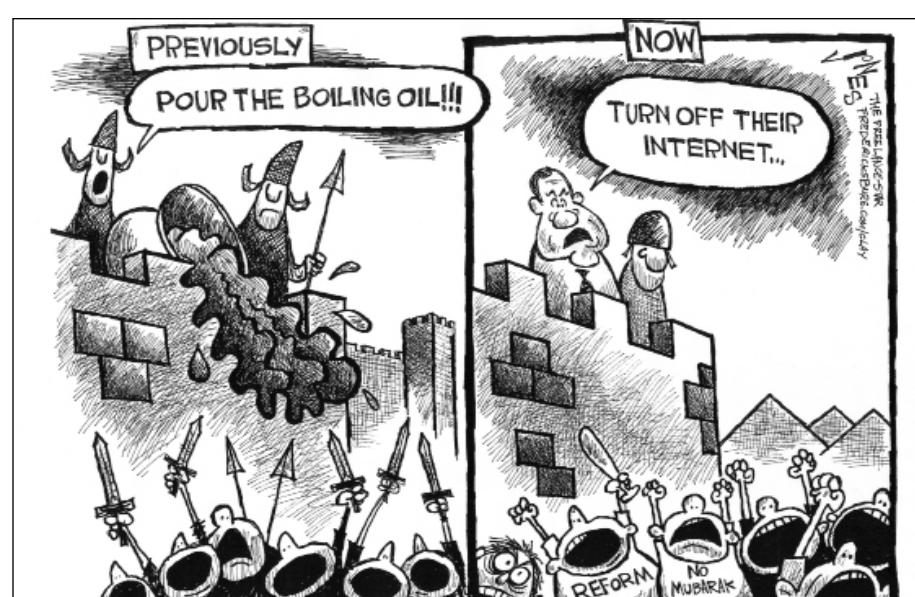
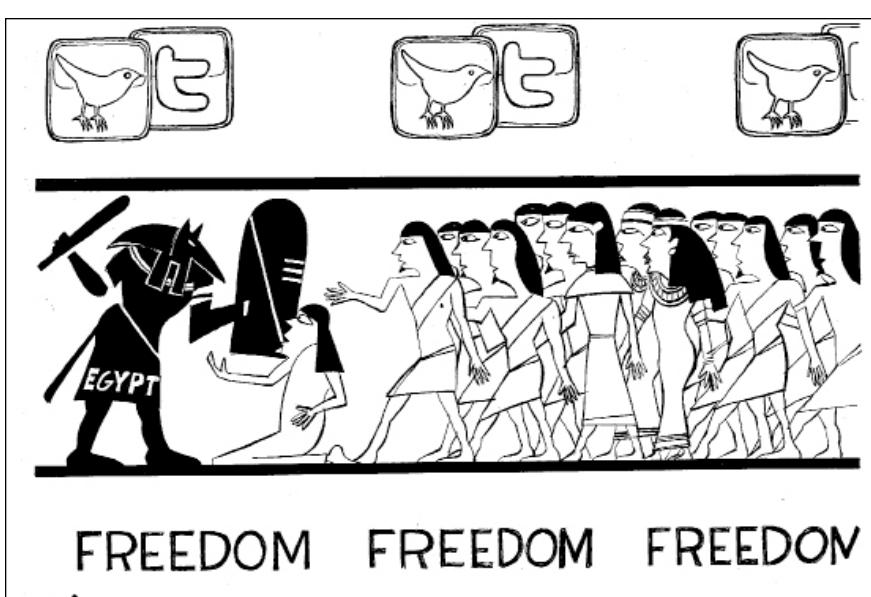
While REX helped me find the perfect

place for me to live as a freshman (and I was sure because I actually had a chance to visit all the dorms, as opposed to during CPW), I did move during IAP of my junior year. I can't imagine how stressful it would be to move in the middle of a term, or be stuck in a place you truly don't want to live while you languish on the waiting list. With all the upperclassmen trying to escape extreme dining prices, how long will it take a freshman to get exactly where they want to be if they don't get it right the first time? It takes more than even the REX period we have now to figure out where to live, so how can that time be cut so short? If you want students to be less exhausted, try making them happier and not needing to pick up and move mid-term. And, if you're worried about the logistics of starting FPOPs on different days, are you

sure you want to transfer that responsibility to the housing office or even mental health services, and make students even more stressed out in the process? Freshmen are already focused on making the transition from high school classes to MIT. It is vital during this time that they have a strong support network, which starts where they live. It will be that much stronger if they really spent time choosing it themselves. There is nothing you can do to make them more "academically ready" than allowing them that freedom.

I'm not even mentioning the importance of REX to the upperclassmen and the dorms themselves. You all know how important it is. Don't let them take it away from you.

Jacqueline Rogoff '10 is a former Vice President of French House and a former resident of East Campus.



TAKE ON A COLUMNIST

Think you have what it takes to tackle a Wall Street Journal argument?

Write for *The Tech's* Opinion section.

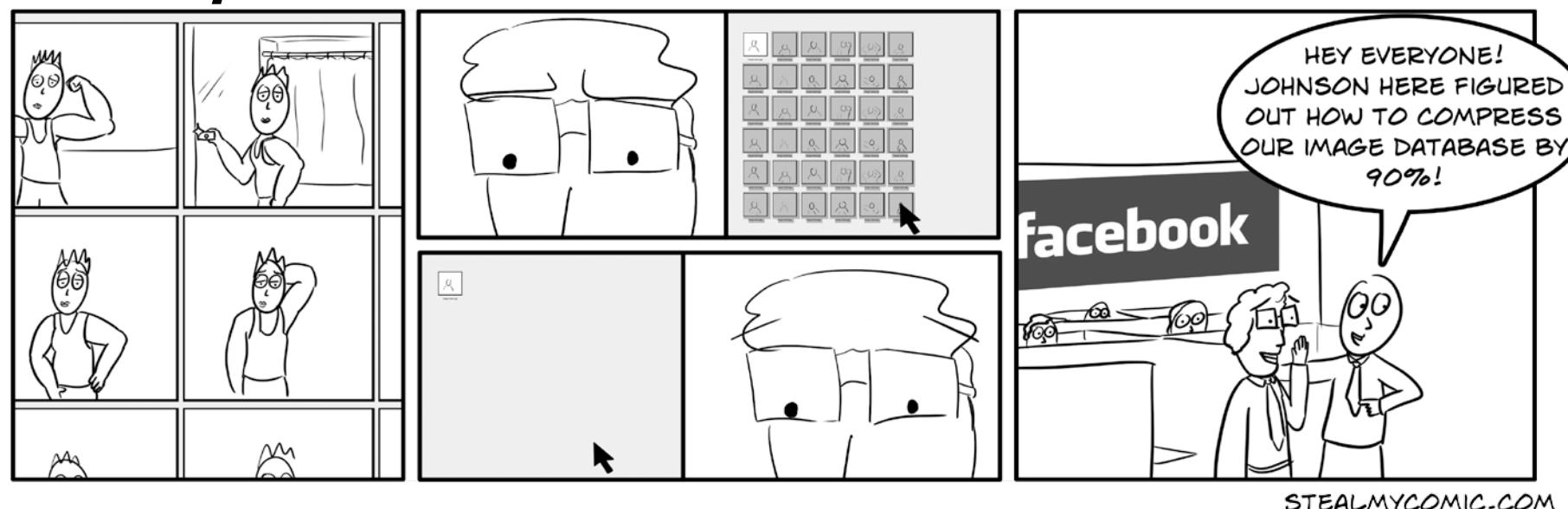


We're looking for writers who want to talk about issues of national and local importance.

Interested or have an idea?

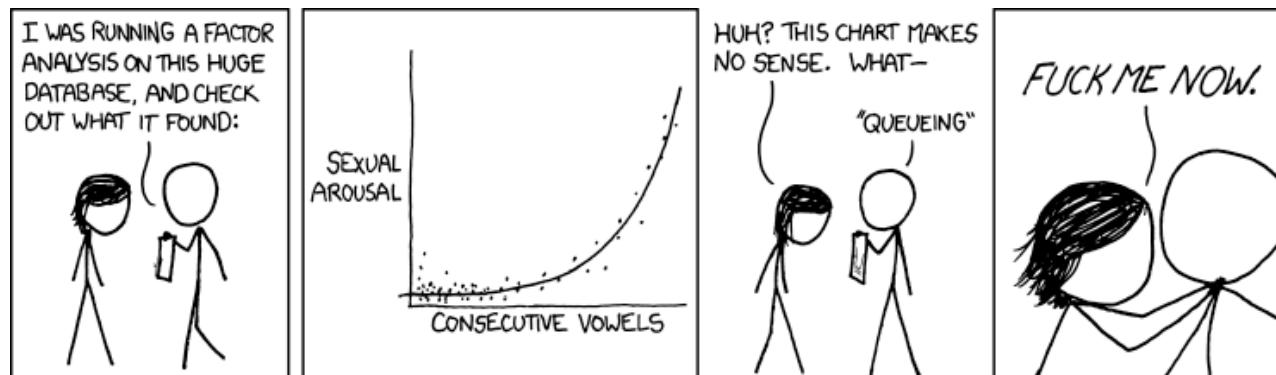
E-mail opinion@tech.mit.edu

Steal My Comic



STEALMYCOMIC.COM

Consecutive Vowels

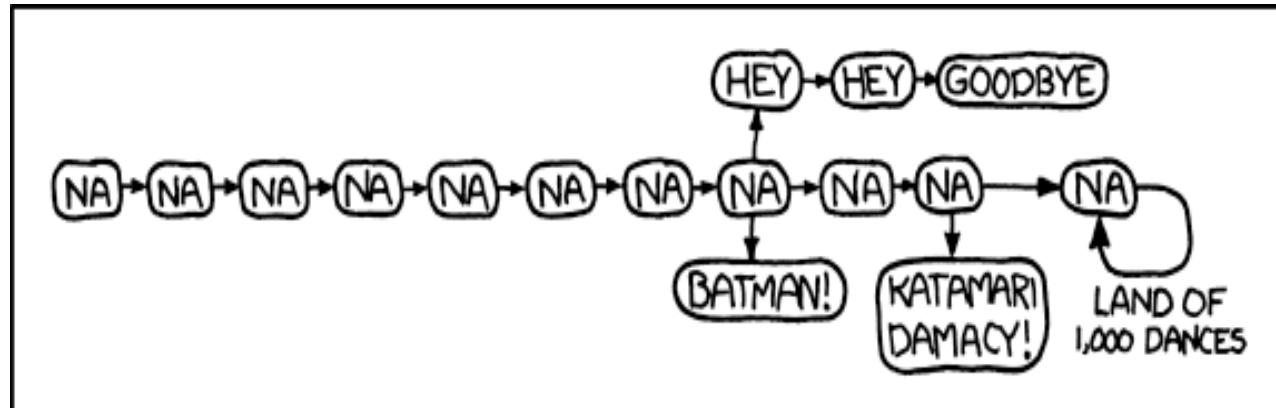


But the Windows! What if there's a *voyeur* watching—wait, how I'm turned on too.

A black and white comic strip by xkcd. It features three stick figures. The figure on the left is sitting and wearing a bowler hat, holding a cane. The figure in the center is standing and reading a book. The figure on the right is standing and looking at a laptop screen. The letters 'x', 'k', 'c', and 'd' are overlaid on the image, with 'x' and 'k' on the left figure, 'c' on the center figure, and 'd' on the right figure.

**A WEBCOMIC OF ROMANCE,
SARCASM, MATH, AND LANGUAGE**
by Randall Munroe

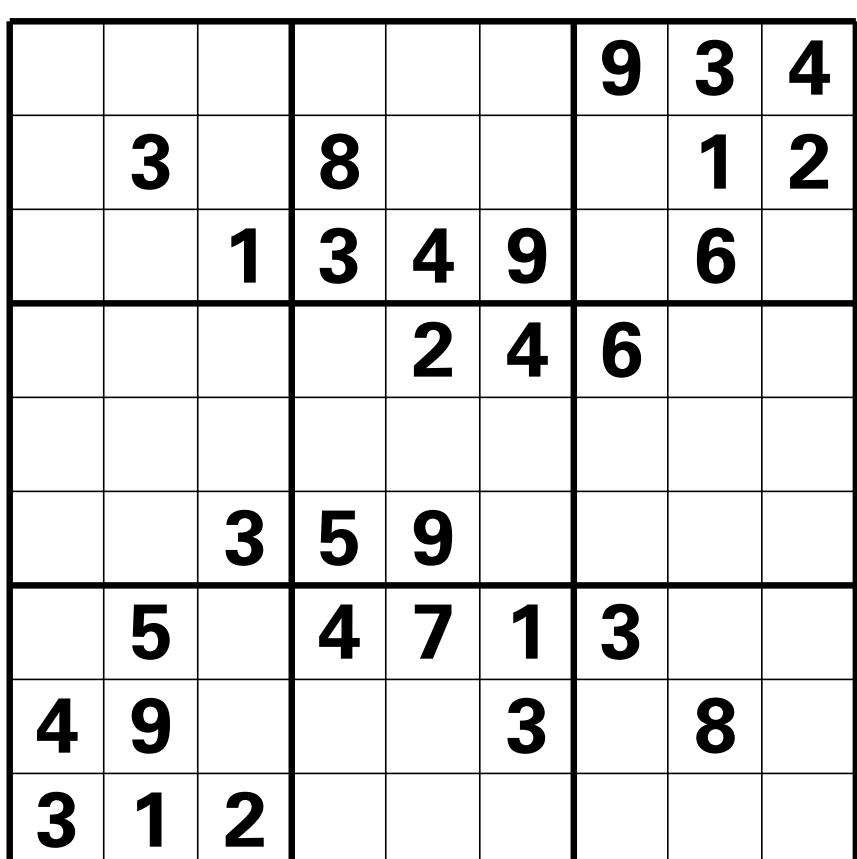
Na



long enough to hear any of them.

Sudoku

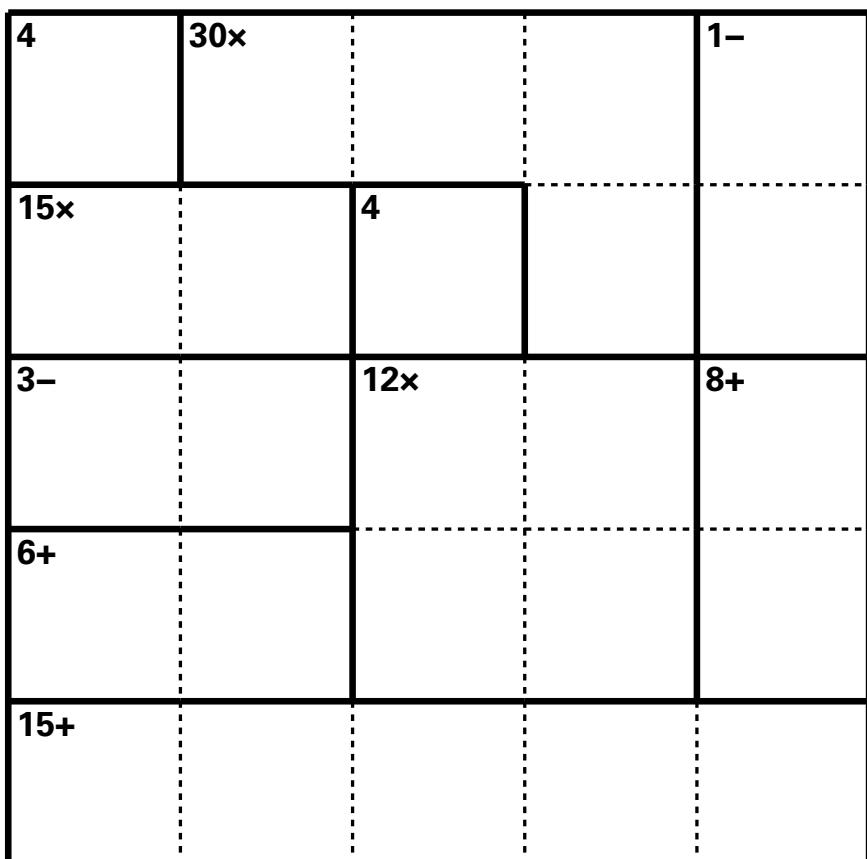
Solution, page 13



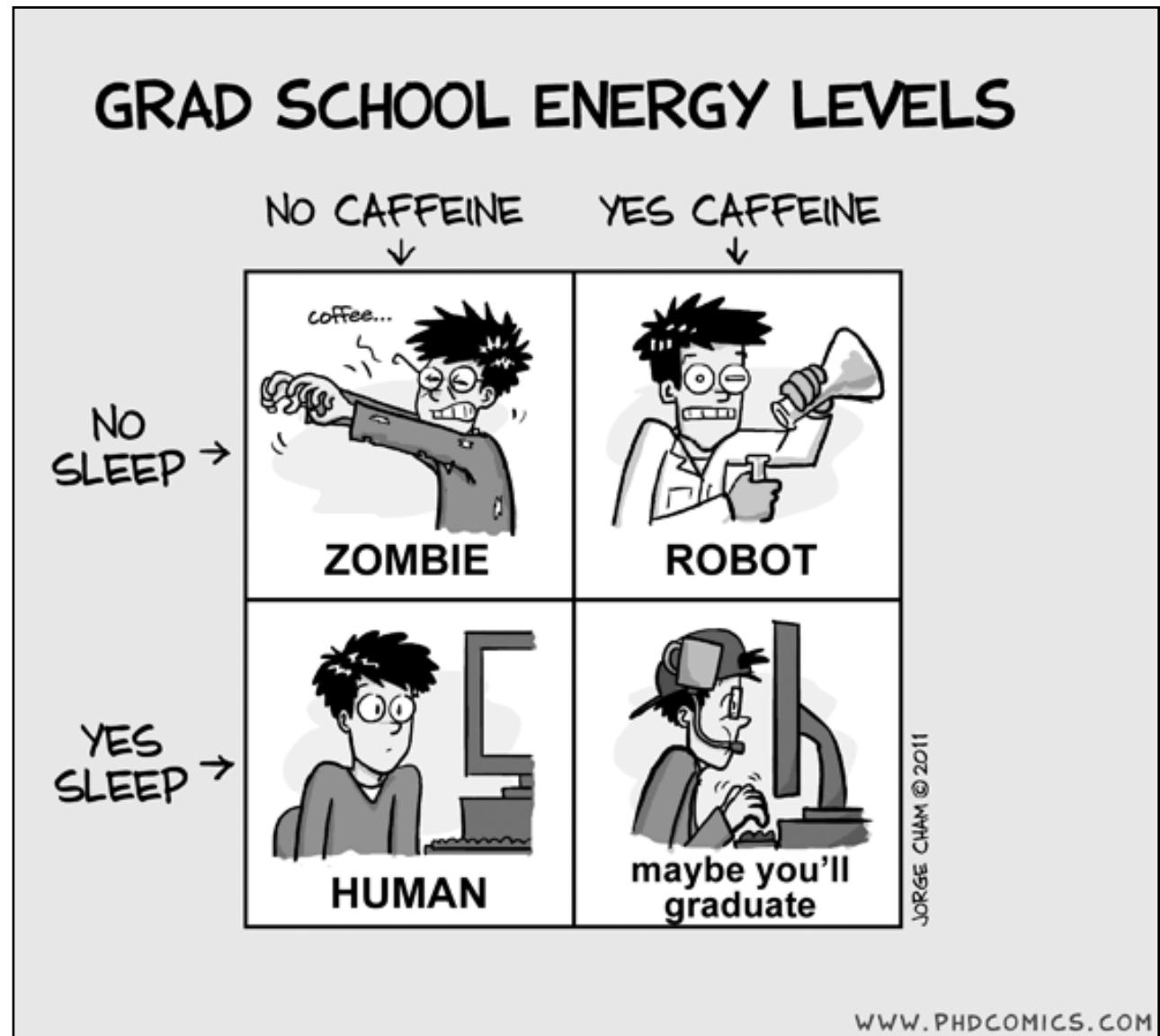
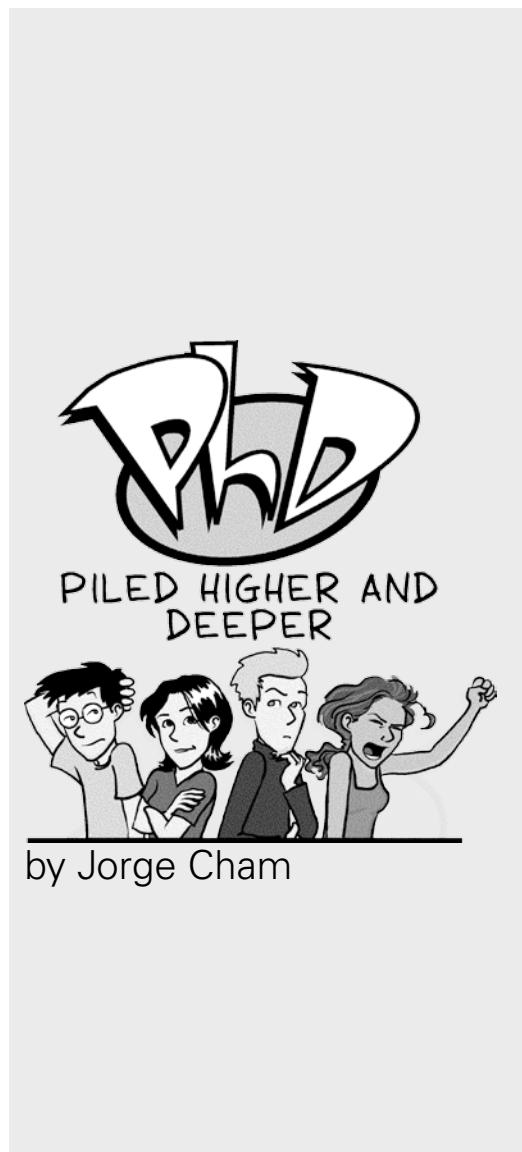
Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku

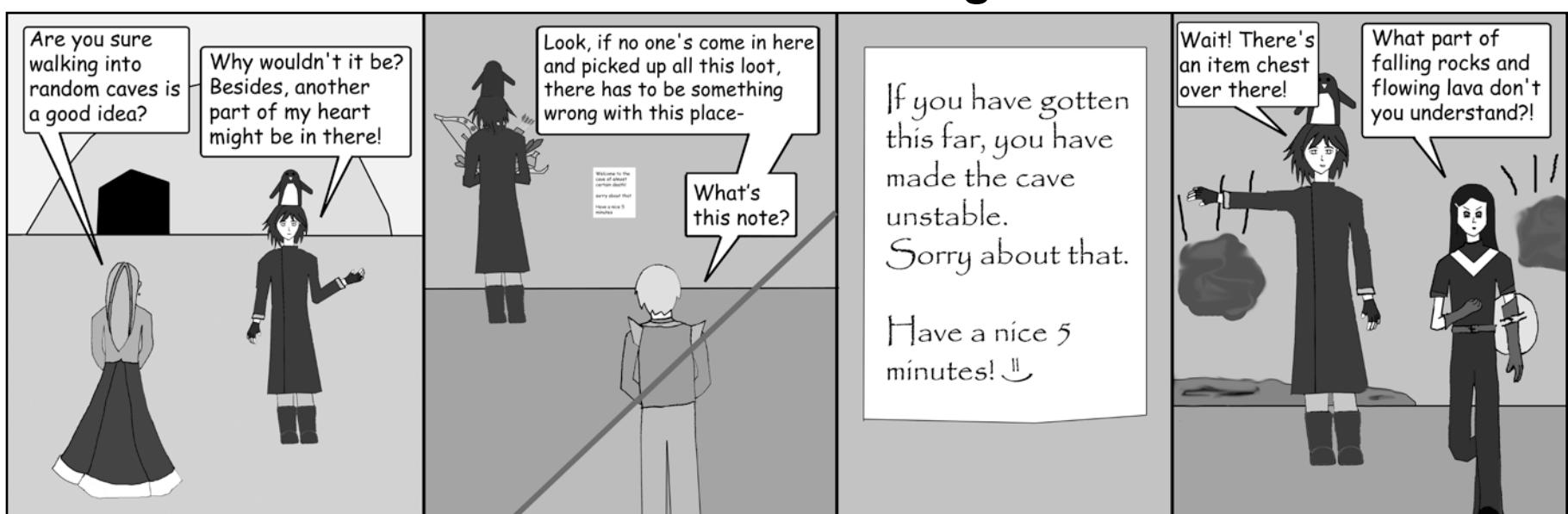
Solution, page 13



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1 through 5. Follow the mathematical operations for each box.



Somewhere on the Search for Meaning... by Letitia Li



Crossword Puzzle

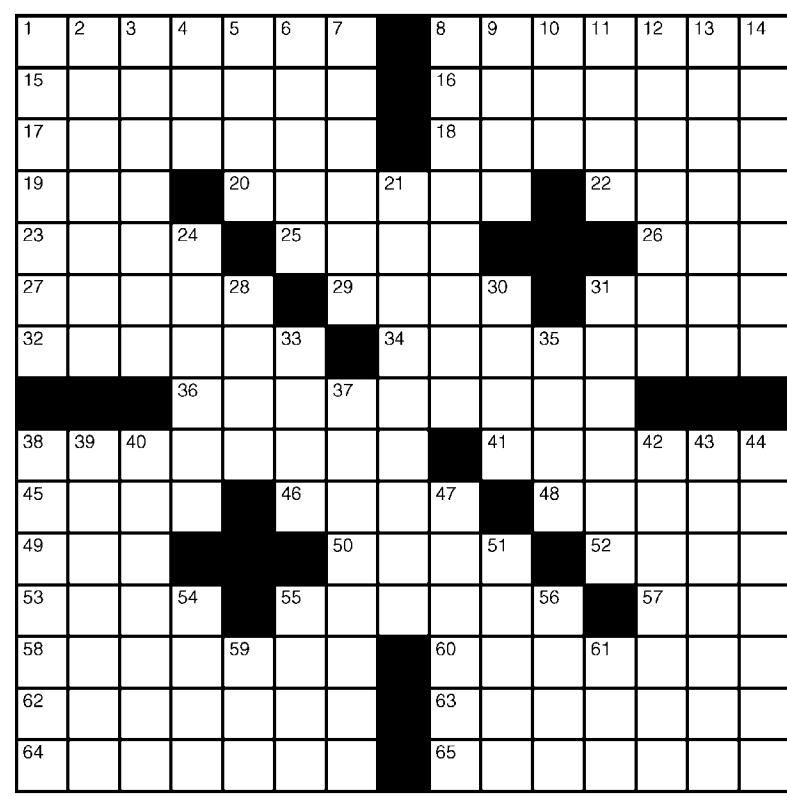
Solution, page 13

ACROSS

- 1 Silent signal
- 46 Okinawa city
- 8 Umbrella cousins
- 8 Mayflower
- 48 Trunk tire
- 9 Fully versed about
- 15 passenger
- 49 Sch. org.
- 10 Lang. course
- 15 Brightest star in
- 50 Machinery parts
- 11 Crimebuster
- Scorpius
- 52 "Auld Lang —"
- 12 Drumming sound
- 16 Bring to life
- 53 Whittle
- 13 Repeat oneself
- 17 Vaccaro and Lee
- 55 "Animal Farm" author
- 18 Took turns
- 57 Restroom sign
- 19 Long, feathery scarf
- 58 Satan
- 20 Ogden resident
- 60 Least sloppy
- 22 Ancient ointment
- 62 Make a connection
- 23 Sugar cube
- with
- 25 Positive votes
- 63 Period of peace
- 26 Latvian chess master
- 64 Poet Siegfried
- 27 Needle cases
- 65 Loud speaker
- 29 Pollution problem
- 31 Gratify completely
- 32 Group of seven
- 34 Set aside
- 36 City near San Diego
- 38 Social Security
- pioneer
- 41 Pager
- 45 Hot pair in poker
- 1 Jabbers
- 2 Along the way
- 3 Get hot under the
- collar
- 4 Soak up some rays
- 5 Pakistani tongue
- 6 "Giant" ranch name
- 7 Exam compositions

DOWN

- 8 Umbrella cousins
- 9 Fully versed about
- 10 Lang. course
- 11 Crimebuster
- 12 Drumming sound
- 13 Repeat oneself
- 14 Stuck one's nose in
- 21 Procrastinate
- 24 Climber's spikes
- 28 Brief time periods
- 30 Silver-tongued
- 31 Soaks
- 33 Tween 12 and 20
- 35 Praiseful poems
- 37 Ancient Greek poet
- 38 Parts of rocker arms
- 39 One of Mark
- Antony's wives
- 40 Becomes fatigued
- 42 Compensation
- 43 Che Guevara's first
- name
- 44 Input data again
- 47 Corrects
- 51 Falling ice
- 54 "Boola Boola" singers
- 55 Suspicious of
- 56 Past due
- 59 Lennon's widow
- 61 X



Level up! Beating the first boss

Lessons I learned from surviving semester one of MIT

By Amanda Aparicio

Holy crap, I survived!

After successfully — a loose definition of “successfully,” mind you — tackling and conquering the feared, abhorrent monster of the first semester of an MIT education, all I wanted to do was shout my glorious victory cheer to any unfortunate passerby. Perhaps this is why people think MIT kids plus a social situation is the equivalent of 1 divided by zero — disaster.

However, in an attempt both to not warrant myself a visit to the loony bin and to further leave the reputation of the MIT social capabilities in shambles, I shared my battle cry only with fellow victors. What a great feeling. But, I did not leave the battlefield sans scars, even though I had the ultimate shield



known lovingly by many freshmen as Pass/No Record.

I learned that to not check your e-mail at least once every three seconds leads to certain death. Similar to Jim Carrey’s character, Bruce, in the comedy *Bruce Almighty*, I found my endurance drained significantly by the plethora of electronic messages I received. What is this organization? How do they have my e-mail address? Yes, I know that you’re having an event, considering you’ve sent me the same e-mail a bajillion times. And no, I do not want to see you two kids argue over this mailing list about nothing. Can’t you just hit “Reply” instead of “Reply All”? In order to ward off such an annoying and inherently inconvenient attack, I normally employ the “Select All Items” + “Delete” combo.

Besides this, first semester also has the power to change you from a happy, morning

person who can easily wake up at 8 a.m. to a nocturnal being who would be much more content staying up until 8 a.m. At first, this ability does not seem like a big deal. With the creation of curtains to block out that pesky daylight and light bulbs to illuminate the time when you actually wish to be awake, who cares when it’s actually day or night? Well, when you have midterms at 9 in the morning and classes at the same time for the next semester, such an attack can be quite powerful. Reversing this convoluted sleep schedule proves to be much more difficult than initializing it, similar to going forward in a reactants-favored reaction with a k value of 10^{-10} . Coffee proves to be the best potion to right this travesty, although a significant amount of willpower is also needed.

Despite all of this and more (just read mitfml.com), I, and others, have survived,

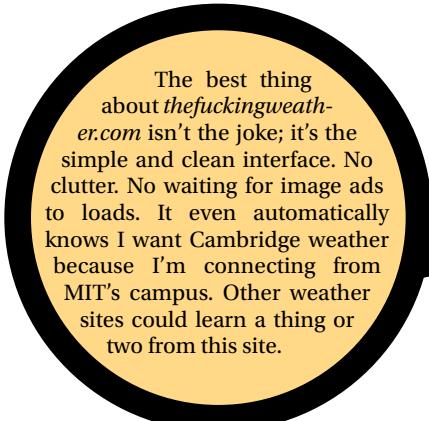
and possibly even prospered. We’ve come out wiser — debatably — and ready to beat the crap out of the next semester. First semester might’ve tricked us since we were such newbs, but now that we’ve leveled up and learned some new attacks of our own, second semester and subsequent monsters at MIT will not have such an advantage. (Hopefully. Who knows? This might be one of those annoying games where your character can actually lose skill points and go down a couple of levels ... that’s awkward. Let’s just hope not — ignore that last comment — and move on, shall we?) So, be you a senior on your way to fight the last boss of MIT or a measly freshman still growing and learning new abilities, I wish you the best of luck with your next round of MIT. Go kick some ... assorted challenges. (you thought I was going to say a--, didn’t you?)

10 websites you might not have heard of

By Paul Woods

Every once in a while, you run into someone who’s lived in a particular city for a long time and knows her way around. She can tell you the best local restaurants, the coolest clubs, and which places to avoid at all costs (the real-life equivalents of 4chan.org). I like to think of myself as that person — except for the Internet. So I might as well show everybody around. Here are ten good sites that you’ve probably never heard of:

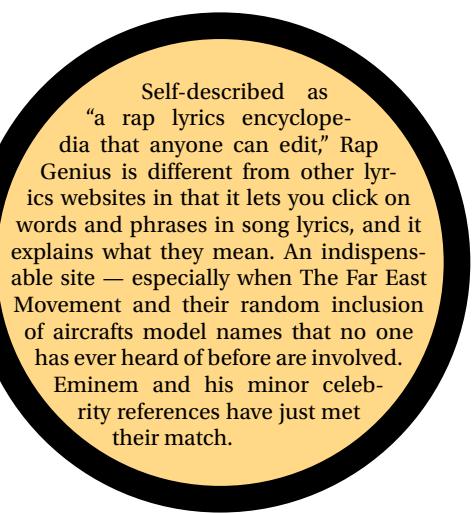
1) TheFuckingWeather.com:



2) News.YCombinator.com:



3) RapGenius.com:



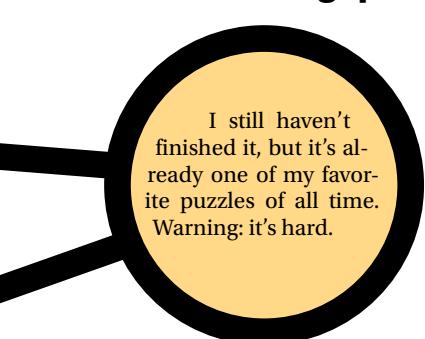
4) StumbleUpon.com:



5) Scholar.Google.com:



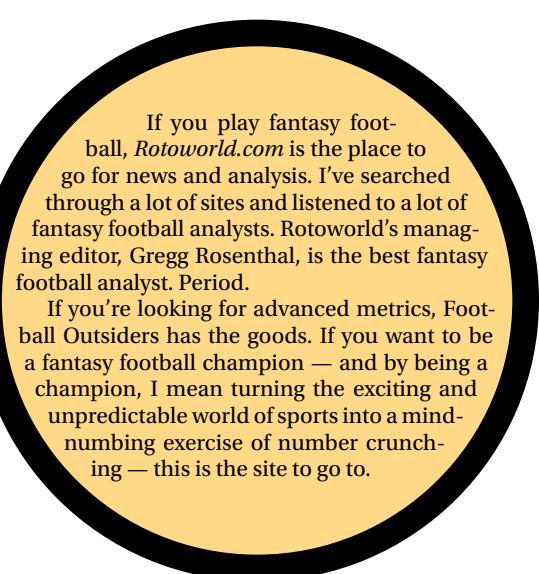
6) HDWhite.org/puzzle:



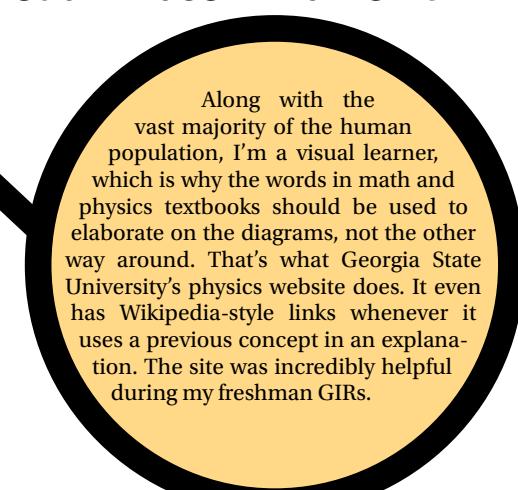
7) DoINeedAFlashIntro.com:



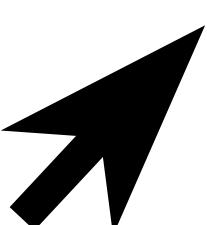
9/10) RotoWorld.com and FootballOutsiders.com



8) HyperPhysics.Phy-Astr.Gsu.edu/HBase/HFrame.html



WWW.stu





SAM RANGE—THE TECH
In order to print full color pages, the paper must pass through four separate presses, with cyan, magenta, yellow, and black layers aligning to produce images.



SAM RANGE—THE TECH
Papers are printed on continuous rolls of newsprint, which are later cut and folded in order.

How does *The Tech* get made?

Last Wednesday, we visited our printer in Auburn, MA, to see the issue from start to finish.



SAM RANGE—THE TECH
Robert D. Allen, Sales Manager at Mass Web Printing Co., displays a freshly-printed and folded black ink plate. Each plate contains the pattern for one color of ink for four pages of *The Tech*.



SAM RANGE—THE TECH
Workers at Mass Web adjust levers on each color press so ink is fed onto rollers such that each page receives sufficient but not excessive amounts of ink across the span of the printing plate.



A machine adds inserts to the inside of complete, folded papers.

SAM RANGE—THE TECH

THEATER REVIEW

Geeky. Humorous. Inspiring. Powerful.

“Bucky” explores the mystery of a genius’s mind

By **Natthida Wiwatwicha**

STAFF WRITER

When I invited a friend to see the play with me, he asked me who R. Buckminster Fuller was. My response was, “He’s an architect, some kind of engineer ... I think.”

“You think?”

All I knew about Fuller was that he was the designer of the geodesic dome and the origin of the names buckyball, fullerene, and buckminsterfullerene. I wanted to see the play to learn more about R. Buckminster Fuller.

But it ended up telling me more than I expected.

I felt as if I had entered a different world when I arrived at the American Repertory Theater. The lobby was fully decorated with mathematical equations, octahedrons, tetrahedrons and the like on the windows, and framed pictures of beautiful geodesic spheres by the ticket area. The atmosphere of the theater resembles a giant lecture room; one filled with warmth, personality, inspiration, and geometric shapes.

The play gave me a two-hour exploration of the eccentric and delightful world of Fuller’s mind.

R. Buckminster Fuller: The History (and Mystery) of the Universe is a one-person show based on the life, work, and writings

R. Buckminster Fuller: The History (and Mystery) of the Universe

American Repertory Theater

Written and directed by

D.W. Jacobs

Starring Thomas Derrah

Multiple showings until
February 4

of Richard Buckminster Fuller (1895–1983). Thomas Derrah’s role depicts Fuller as the night’s guest speaker who wants to share his life story — from his family to discoveries, from contemplation on nature as the solution to all designs to his perspectives on socioeconomic issues. It was an interesting performance: Derrah had to effectively deliver not only the human emotions and character of Fuller, but also the engineer-scientist-mathematician-mind. Derrah immersed himself in the world of Fuller as he recited line after line about synergy and beautiful physical structures. He moved around like a child, both physically and

mentally — imaginative, independent, curious. Derrah’s performance made me wish I could meet the real Fuller when he was still alive.

The introduction about Fuller’s childhood revealed his fascination with nature and natural intuition. His independence from all constraints imposed artificially by others foreshadows events in his life, including two expulsions from Harvard.

As far as humor is concerned, MIT students may appreciate some of it more than the rest of the audience. Jokes about gravity and pi made me feel at home. Derrah also engaged the audience, inviting them to sing along with him, to stand up and feel the earth rotate at 23 degrees off the axis with him. Occasionally, an impassioned Derrah moved around while speaking, the stage resembling an acid trip with floating tensegrity structures. What a great visual representation of Fuller’s captivation.

The most important experience I took from the play was Fuller’s life philosophy. After becoming unemployed and depressed before the start of his successful career as a revolutionary inventor, Fuller ponders: “What can one penniless person do on behalf of humanity?” Such a question would prompt any person to live and work to their full potential. Fuller was an engineer and a scientist, but for the sake of something larg-

er. He focused on the responsibility of scientific revolution and technology to make the world a better place: “We are here for problem-solving. Not to have problems out of the way in some stupid, sublime something called peace. We’re here strictly for problem-solving, and the better you get at it, the more problems you’re going to get to solve.”

One warning: A hundred minutes of fluid monologue, no matter how worthy of your attention, might turn baffling and soporific. A cup of coffee during the intermission might solve that problem.

Derrah portrayed Fuller as a visionary, a designer of not only physical creations but also of ideas, his own life, the world, and the future. But whatever he was, I gained so much respect for this man without having to read a single book about him. I am grateful for the two hours of entertainment, education, and for the opportunity to meet him, even as a character in a play. This is one of the many lines in the play that I will keep close to my heart for the rest of my life: “You don’t belong to you, you belong to the Universe.”

Tip: Go online to look at the show times, but do not buy the tickets. Student Rush promises great seating for only \$15. All you have to do is get there 15 minutes before the play.

Seven names as valuable as our own

You don’t build a 200-year history of excellence in financial services without learning a few things. Like how to recognize and celebrate colleagues with exceptional qualities. And the importance of training and developing them throughout their careers. We are proud to welcome the seven MIT students who will be joining us full-time this summer. Congratulations to them on all their success.



jpmorgan.com/careers

Kelly Duncan

Molly McCartin

Jonathan Smith

Carolyn Wang

Steven Wu

Alice Yu

Ignacio del Pino

J.P.Morgan

An Equal Opportunity and Affirmative Action Employer M/F/D/V.
© 2011 JPMorgan Chase & Co. All rights reserved.

**Have humorous commentary about a campus topic?
Send 500 words and a pic to cl@tech.mit.edu.**

Some athletes consider transfer after varsity cuts

Student athletes, Director of Athletics recall the emotions of slashing varsity sports

Varsity cuts, from Page 1

Alpine Skiing Team when the cuts were made. She recalls the emotional morning of the announcement.

"Half of the team was crying. The other half had this sad look on their faces," she said. Reddy had considered the varsity skiing team a second family whose bond was strengthened by living in a New Hampshire cabin together every IAP. When it came time for cuts to be made, she had a feeling her team was going to lose its varsity status.

"We kind of knew it was coming. Skiing is a very expensive sport and the size of the team versus cost per person was much higher than a lot of the other varsity sports," she said.

Stephanie C. Leger '11 and Elaine Y. Chin '94, now both players on the Women's Club Ice Hockey team, remember the surprise of the announcement. Chin, an alumni player on the club team at the time, found out about the cuts at the same time as most of the MIT community — when DAPER released its letter explaining the cuts to the public. Leger, who was on the varsity team, claimed that no one had any idea of the impending cuts during the season. "It was a bit of a shock," she said.

Many athletes on the cut teams had planned to play varsity sports for the entirety of their MIT undergraduate career, including Riley E. Brandt '11, current captain of the Men's Club Hockey Team and a varsity member at the time of the cuts. "A big reason why a lot of students picked MIT was the opportunity to play their sport while they studied here," he said.

Nicholas C. Swenson '12, currently the Golf Club team president, had come to MIT expecting to play varsity golf. The initial frustration stemming from the cuts almost caused him to make a spur-of-the-moment decision to transfer out of MIT. After the cuts, Harvard's golf coach said that

although Harvard was not accepting transfer students at the time, there was a possibility that an exception for Swenson could be made if he joined Harvard's golf team.

"I don't know how serious I was about transferring at the time. Looking back, I'm glad I didn't," he said.

Kristen D. Watkins '11, now co-captain of the Women's Club Gymnastics team, claimed that many members of the team were aware of the possibility of losing varsity status. Still, she felt that the cut upset many of the gymnasts who came to MIT to compete on a varsity level. She herself originally applied to MIT only after hearing of the varsity gymnastics program.

"I think for a lot of people it was kind of upsetting to come and choose this school and for [DAPER] to cut the reason they came here," she explained.

Prospective students, too, were frustrated. As an incoming freshman at the time, Ryan J. Madson '13 was not at MIT when the cuts were made, but he was still frustrated at not being able to compete on a varsity level for MIT's Wrestling team as he had intended. "I was kind of disappointed that I didn't get the opportunity [to compete in varsity]," he said.

Men's Club Gymnastics President and former varsity team member Jacob T. Shapiro '11, who described the cuts as "disappointing and frustrating," said the team was confused about what to do next. "It wasn't really clear what was going to happen with the team," he said.

Although the initial announcement struck the Varsity Pistol team pretty hard, they were ready to move on about a week later, according to Pistol Club Team Captain Andrew K. Sugaya '11. Sugaya had suspected the pistol team was going to be cut when DAPER sent out an e-mail to

members of the cut teams, requesting their presence at the April 23 meeting.

Emotions ran high even for MIT students not on varsity teams. After the announcement was made that cuts were imminent, but three weeks before the affected teams were announced, student-athletes from across MIT's athletics programs staged a protest in Lobby 7. Over 100 students attended a DAPER question-and-answer session two days after the announcement was made, and outraged letters flooded the *Tech* Opinion inboxes. On April 13, students "kidnapped" Tim the Beaver at the inaugural Beaver Bowl event during DAPER's annual spring Athletics Weekend, demanding that student opinion be heard and that the cuts be delayed at least one year. On April 24, the day after the sports to be cut were announced, the *New York Times* ran an article on the cuts, quoting a column from then-*Tech* opinion writer Ethan A. Solomon '12 (now the *Tech* Editor in Chief) and then-varsity pistol coach Will Hart.

"MIT has a certain culture," said Hart to the *Times*. "The students need release. I hope they find something else that was as close to enjoyable as their sport was."

An MIT Women's League activity. Students welcome!

"Put an emotion there, and it was there"

Soriero, too, recalls how difficult it was for her to make the announcement.

"There was a lot of disappointment, hurt, frustration, and anger. Put an emotion there, and it was there," she said.

She reasoned that supporting 41 varsity teams had always been an issue for DAPER. However, when the economic recession hit the Institute, it was time for a budget cut. More than 50 percent of the DAPER budget at the time went to varsity programs, she said, so there was no way to avoid looking at varsity programs when making cuts.

She states that the department was still picking which teams to cut when they announced that such a decision was impending. She and the rest of her team wanted to make sure that the right amount of cuts were made so they would never have to make a similar decision again.

When considering cuts, the DAPER administration looked at every team, and not just from a cost perspective — although Soriero does admit that in many cases, cuts were made from the most expensive sports per participant. Soriero cites the DAPER Health and Vitality Report, an ongoing study that started collect-

ing data in 2003, as one source of information. The report broke down topics including roster size, competition, and other trends for each team. DAPER also considered the league each team was in.

"We had a number of [varsity] sports that are now club that were competing in a club league, or they were only competing against club sports," she explained, like pistol.

"But we were trying to sustain them at a varsity level in terms of all the support services, coaching, compliance, etc. So if they were a club and if they continued to compete in the exact same conference they were in, they would have the same competitive opportunities as their counterparts."

At the time of the cuts, there was a moratorium on the number of club sports. Ultimately, this moratorium was lifted to allow the cut varsity sports without club equivalents the opportunity to continue on as club sports.

Still, in the hours and days after the cuts were announced, few players on any team knew what to expect in the upcoming year.

"It was kind of just like [DAPER] left us to figure it out," said Leger.

This is the first in a three-part series on the current status of MIT's cut varsity sports.

LEGAL COUNSEL

MIT students, family, employers and start-ups seeking U.S. legal counsel, campus or office consultation. Call:

James Dennis Leary, Esq.
321-544-0012

Solution to Sudoku

from page 7

6	8	5	7	1	2	9	3	4
9	3	4	8	6	5	7	1	2
7	2	1	3	4	9	8	6	5
5	7	8	1	2	4	6	9	3
2	4	9	6	3	8	5	7	1
1	6	3	5	9	7	2	4	8
8	5	6	4	7	1	3	2	9
4	9	7	2	5	3	1	8	6
3	1	2	9	8	6	4	5	7

Solution to Techdoku

from page 7

4	1	5	3	2
3	5	4	2	1
5	2	1	4	3
2	4	3	1	5
1	3	2	5	4

Solution to Crossword

from page 8

G	E	S	T	U	R	E	P	I	L	G	R	I	M
A	N	T	A	R	E	S	A	N	I	M	A	T	E
B	R	E	N	D	A	S	R	O	T	A	T	E	D
B	O	A	U	T	A	H	A	N	N	A	R	D	
L	U	M	P	A	Y	E	S	T	A	L			
E	T	U	I	S	SM	OG	S	A	T	E			
S	E	P	T	E	T	A	L	L	O	T			
O	C	E	A	N	S	O	D	E					
T	W	O	N	S	E	N	D	B	E	E	P	E	R
A	C	E	S	N	A	H	A	S	P	A	R	E	
P	T	A	C	M	A	S	S	Y	N	T			
P	A	R	E	O	R	W	E	L	M	E			
E	V	I	L	O	N	E	N	A	E	T			
T	I	E	I	N	T	O	D	E	T	E			
S	A	S	S	O	N	S	T	E	N	T			

+ QUANTITATIVE TRADING AT JANE STREET WILL CHALLENGE YOUR SKILLS IN A DYNAMIC ENVIRONMENT THAT PRIZES THE DEVELOPMENT OF NEW IDEAS AND TRADING STRATEGIES.

+ NO FINANCE EXPERIENCE IS NECESSARY, ONLY INTELLECTUAL CURIOSITY AND THE DESIRE TO LEARN.

JOIN US TO LEARN MORE!

TUESDAY, FEB. 1ST

6:30 PM – 8:00 PM

ROOM 5-234

FOOD AND BEVERAGE WILL BE SERVED.

 JANE STREET
WWW.JANESTREET.COM

NEW YORK
LONDON
HONG KONG

A wake-up call from MIT's Sherry Turkle: our use of technology is fueling disturbing levels of isolation, leaving us incapable of distinguishing between true human connection and digital communication.

In stock now!



The MIT Press Bookstore

292 Main Street

Kendall Sq., Cambridge

(617) 253-5249

books@mit.edu

9-7 M-F, 10-6 Sa, 12-6 Su

Free on-campus Delivery!

ing data in 2003, as one source of information. The report broke down topics including roster size, competition, and other trends for each team. DAPER also considered the league each team was in.

"We had a number of [varsity] sports that are now club that were competing in a club league, or they were only competing against club sports," she explained.

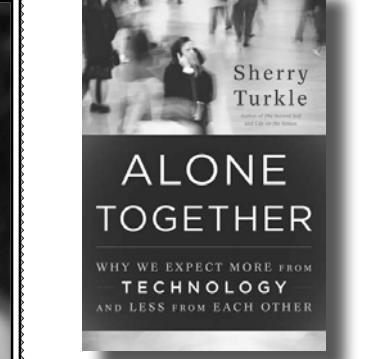
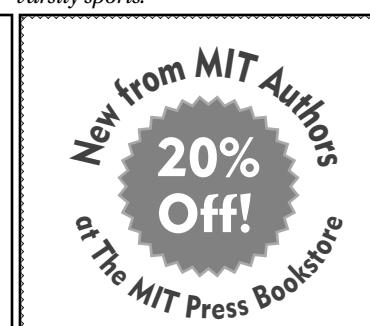
"But we were trying to sustain them at a varsity level in terms of all the support services, coaching, compliance, etc. So if they were a club and if they continued to compete in the exact same conference they were in, they would have the same competitive opportunities as their counterparts."

At the time of the cuts, there was a moratorium on the number of club sports. Ultimately, this moratorium was lifted to allow the cut varsity sports without club equivalents the opportunity to continue on as club sports.

Still, in the hours and days after the cuts were announced, few players on any team knew what to expect in the upcoming year.

"It was kind of just like [DAPER] left us to figure it out," said Leger.

This is the first in a three-part series on the current status of MIT's cut varsity sports.



ALONE TOGETHER

Why We Expect More from Technology and Less from Each Other

by Sherry Turkle

\$28.95, Basic Books, 2011

**MIT
+150**
**INVENTIONAL
WISDOM**

exhibit

'Technology' Through Time: 150 Years of MIT History

Opening Reception:
Friday, February 4, 1-3pm
Maihaugen Gallery (14N-130)

Music and refreshments.
Free and open to the MIT Community.

This multimedia exhibition in the Maihaugen Gallery showcases in words, documents, photos and video, the broad and varied history of MIT. The exhibit will feature original MIT documents and materials, including items from the MIT150 Exhibition.

MIT Libraries

libraries.mit.edu/maihaugen

**BARCLAYS
CAPITAL**

**EXPECT TO
CONNECT TO
THE WORLD.**

MIT SPRING 2011 CAREER FAIR

Tuesday, February 1st, 2011
9:00AM-3:00PM

At Barclays Capital, we won't settle for anything less than exceptional growth, even in today's ever-changing markets - that goes for our company and every one of our talented employees. To learn more about our company, please stop by our booth!

Summer Application deadline: **11:59PM**
Wednesday, February 2nd, 2011

Please apply via CareerBridge as well as the Barclays Capital online application system at <http://www.barcap.com/expectexcellence>.

Visit [barcap.com/expectexcellence](http://www.barcap.com/expectexcellence)
Expect Excellence



Gates calls for final push to end polio

By Donald G. McNeil Jr.
THE NEW YORK TIMES

NEW YORK — On Monday, in a Manhattan town house that once belonged to polio's most famous victim, Franklin D. Roosevelt, Bill Gates made an appeal for one more big push to wipe out world polio.

Although that battle began in 1985 and Gates started making regular donations to the cause only in 2005, he has emerged in the last two years both as one of the biggest donors — he has now given \$1.3 billion, more than the amount raised over 25 years by Rotary International — and as the loudest voice for eradication.

As new outbreaks create new setbacks each year, he has given ever more money, not only for research but for the grinding work on the ground: paying millions of vaccinators \$2 or \$3 stipends to get pink polio drops into the mouths of children in villages, slums, markets and train stations.

He also journeys to remote Indian and Nigerian villages to be photographed giving the drops himself. Though he lacks Angelina Jolie's pneumatic allure, his lingering "world's richest man" cologne is just as aphrodisiacal to TV cameras.

He also uses that celebrity to press political leaders. Rich Gulf nations have been criticized for giving little for a disease that now chiefly affects Muslim children; last week in Abu Dhabi, United Arab Emirates, Gates and Crown Prince Sheik Mohammed bin Zayed Al Nahyan jointly donated \$50 million each to vaccinate children in Pakistan and Afghanistan. In Davos, Switzerland, Gates and the British prime minister, David Cameron, announced that Britain would double its \$30 million donation. Last month, when the Pakistani president, Asif Ali Zardari, went to Washington for the diplomat Richard C. Holbrooke's funeral, Gates offered him \$65 million to initiate a new polio drive. Twelve days later, publicly thanking him, Zardari did so.

However, even as he presses forward, Gates faces a hard question from some eradication experts and bioethicists: Is it right to keep trying?

Although caseloads are down more than 99 percent since the campaign began in 1985, getting rid of the last 1 percent has been like trying to squeeze Jell-O to death. As the vaccination fist closes in one country, the virus bursts out in another.

In 1985, Rotary raised \$120 million to do the job as its year-2000

"gift to the world."

The effort has now cost \$9 billion, and each year consumes another \$1 billion.

By contrast, the 14-year drive to wipe out smallpox, according to Dr. Donald A. Henderson, the former World Health Organization officer who began it, cost only \$500 million in today's dollars.

Henderson has argued so outspokenly that polio cannot be eradicated that he said in an interview last week: "I'm one of certain people that the WHO doesn't invite to its experts' meetings anymore." Recently, Richard Horton, editor of *The Lancet*, the influential British medical journal, said via Twitter that "Bill Gates' obsession with polio is distorting priorities in other critical BMGF areas. Global health does not depend on polio eradication." (The initials are for the Bill & Melinda Gates Foundation.)

And Arthur L. Caplan, director of the University of Pennsylvania's bioethics center, who himself spent nine months in a hospital with polio as a child, said in an interview, "We ought to admit that the best we can achieve is control."

Those arguments infuriate Gates. "These cynics should do a real paper that says how many kids they're really talking about," he said in an interview. "If you don't keep up the pressure on polio, you're accepting 100,000 to 200,000 crippled or dead children a year."

Right now, there are fewer than 2,000. The skeptics acknowledge that they are arguing for accepting more paralysis and death as the price of shifting that \$1 billion to vaccines and other measures that prevent millions of deaths from pneumonia, diarrhea, measles, meningitis and malaria.

"And think of all the money that would be saved," Gates went on, turning sarcastic. "It'd be like 5 percent of the dog food market in the United States."

(Americans spend about \$18 billion a year on pet food, according to the American Pet Products Association.)

Both he and the skeptics agree that polio is far harder to beat than smallpox was.

One injection stops smallpox, but in countries with open sewers, children need polio drops up to 10 times.

Only one victim in every 200 shows symptoms, so when there are 500 paralysis cases, as in the recent Congo Republic outbreak, there are 100,000 more silent carriers.

Boston
TEES.BZ
custom apparel

SCREENPRINTING AND EMBROIDERY

COLLEGES • TEAMS • EVENTS

SPIRIT WEAR • FUNDRAISERS

FRATERNITIES • SORORITIES

T-SHIRTS • HOODIES • HATS

JACKETS • FLEECE

• POLOS •

CALL or visit us ONLINE today!!

857 • 540 • 3148

www.bostontees.bz

TBP SPRING 2011 CAREER FAIR

9AM-3PM Rockwell Cage

Tuesday, February 1



TODAY

TAU

TAU BETA PI

Networking Banquet 5-7 PM
at Hyatt Regency Cambridge
web.mit.edu/tbp/www/career.shtml

Bloomberg

Palantir



Tessella
Technology & Consulting



JANE STREET

ORACLE



Microsoft



ANALOG DEVICES



Boston Scientific

TWO SIGMA



Exponent



CHOPPER TRADING



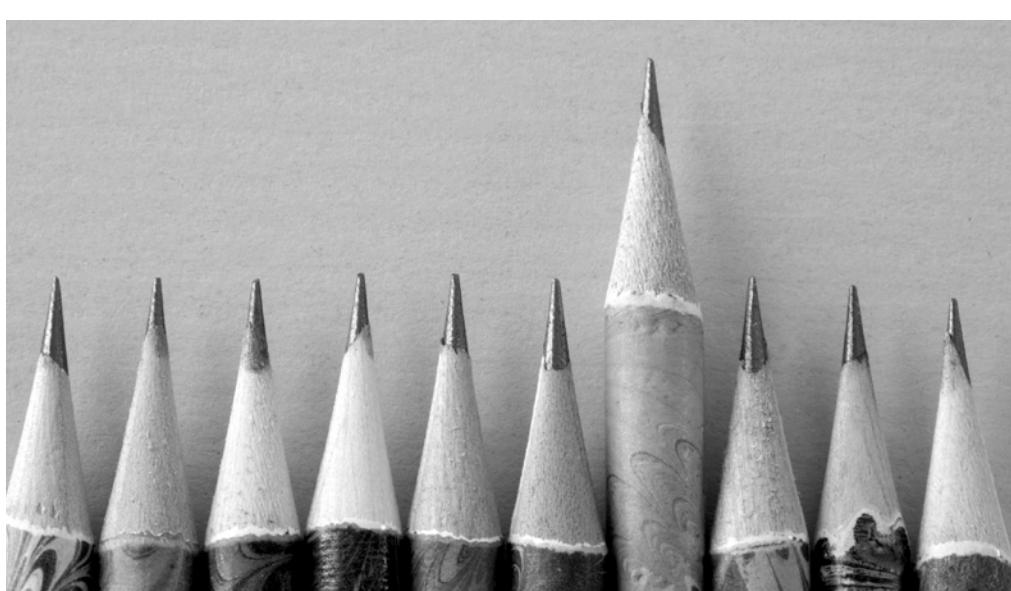
amazon



Congratulations!

2011 Burchard Scholars

Heather Acuff	Jack Jester-Weinstein
Reuben Aronson	Kristin Kagetsu
Zachary Barryte	Nidhi Kulkarni
Dorota Chapko	Margaret Lloyd
Linda Xinlin Chen	Lauren Ouellette
Tiffany Cheng	Yuliya Preger
Elizabeth Choe	Karan Sagar
Sara Comis	Arun Saigal
Abismael Diaz	Narendra Tallapragada
Allison Dobry	Sasha Targ
Melina Flores	Anjali Thakkar
Katelyn Gao	Judith Vasquez
Elizabeth George	Aditi Verma
Emily Jackson	Mark Wittels
Sae Kyoung Jang	Edward Yang



The Burchard Scholars Program brings together distinguished members of the faculty and promising sophomores and juniors who have demonstrated excellence in some aspect of the humanities, arts, and social sciences. The Burchard Program format is a series of dinner seminars held during the academic year to discuss topics of current research introduced by MIT faculty members.

great ideas change the world

SCHOOL OF HUMANITIES, ARTS, AND SOCIAL SCIENCES

MINOR IN HASS

Build your 3-4 subject concentration into a 6-subject minor.

You may only need 2 or 3 more classes.

Choose from 30 HASS Fields

You may find that your 3- to 4-subject required HASS Concentration has not satisfied your curiosity about your field of choice. By adding 2 or 3 subjects to your concentration, you can build a 6-subject minor that allows you to explore the field in greater depth. Each year hundreds of MIT undergraduates decide to minor in the Humanities, Arts, and Social Sciences.

Ancient and Medieval Studies
Anthropology
Applied International Studies
Comparative Media Studies
Economics
Foreign Languages
Chinese
French
German
Japanese
Spanish
History
History of Architecture & Art
Linguistics
Literature
Music

Philosophy
Political Science
Psychology
Public Policy
Regional Studies
African and African Diaspora
East Asian
Latin American
Middle Eastern
Russian
Science, Technology, and Society
Theater Arts
Urban Studies and Planning
Visual Arts and Design
Women's and Gender Studies
Writing

great ideas change the world

SCHOOL OF HUMANITIES, ARTS, & SOCIAL SCIENCES

shass.mit.edu/undergraduate/mmj/minors

The world has problems. You have ideas.

We have up to \$150,000 to help make your ideas reality.



Win up to \$25k per team with innovative projects that benefit an underserved community.

Enter an **initial proposal** by February 5 for mentorship, feedback, and development grants at <http://globalchallenge.mit.edu>

*Final chance to submit an initial proposal is March 5; all teams must enter at least one initial proposal to enter a final proposal April 5.



Join us for our Spring Generator Dinner on February 23!
RSVP to globalchallenge-rsvp@mit.edu

sponsored by

IDEAS2011  MIT GLOBAL CHALLENGE
Service at the Intersection of Innovation and Entrepreneurship



US pushes nuclear energy, but its projects lag

Only two of four top reactor projects moving forward, though politicians favor them

By Matthew L. Wald
THE NEW YORK TIMES

WASHINGTON — In his State of the Union address, President Barack Obama proposed giving the nuclear construction business a type of help it has never had, a role in a quota for clean energy. But recent setbacks in a hoped-for "nuclear renaissance" raise questions about how much of a role nuclear power can play.

Of four reactor projects identified by the Energy Department in 2009 as the most likely candidates for federal loan guarantees, only two are moving forward. At a third, in Calvert Cliffs, Md., there has been no public sign of progress since the lead partner withdrew in October and the other partner said it would seek a replacement.

And at the fourth, in Texas, a would-be builder has been driven to try something never done before in nuclear construction: finding a buyer for the electricity before the concrete is even poured. Customers are not rushing forward, given that the market is awash in generating capacity and an alternative fuel, natural gas, is currently cheap.

"The short answer is, there has to be a market for the power," said John Reed, an investment banker who specializes in nuclear projects. "That's the most immediate hurdle these projects have to get over."

Yet there is a fairly sturdy political consensus in favor of building more reactors. By including nuclear power in a proposed "clean energy standard" shifting the electric system away from conventional coal and gas, whose emissions contribute to global warming, the Obama administration is seeking to stoke such support.

Many Democrats and most Republicans in Congress back nuclear construction, as do local officials in most places where reactors have been proposed.

Sen. Lamar Alexander, R-Tenn. and one of the Senate's strongest proponents of nuclear power, suggests Obama should make building 100 reactors in the next 20 years a national priority, both for en-

ergy security and to limit climate-changing emissions.

But for now, he acknowledges, the economics are not in place. "Right now, it's stuck," he said of the planned nuclear revival.

Some challenges are not peculiar to the nuclear sector. All forms of clean energy, including solar and wind power, are undercut to some extent by the cheap price of natural gas and the surplus in generating capacity, which is linked partly to the recession. And federal caps on carbon dioxide emissions from coal- and gas-burning plants, which would benefit clean energy

sources, are not expected until 2012.

But some obstacles are specific to the nuclear industry, like the ballooning cost estimates for construction of reactors, which are massive in scale. Even when projects are identified as prime candidates for federal loan guarantees, some investment partners turn wary.

"All that uncertainty creates an incentive for you to wait," said Joseph Aldy, who was a special assistant to Obama until December, said of the nuclear projects.

To counter the uncertainties, Alexander and others have arranged

substantial help for the industry. The Nuclear Regulatory Commission has been working for more than 15 years to streamline reactor licensing to cut construction time and to reduce risk. And the 2005 Energy Policy Act provided money for loan guarantees, subsidies for production from the first few reactors and insurance against regulatory delays.

Industry executives say with those changes and the financial help, they had what they needed to build after a gap of three decades. By 2008, the NRC had 15 applications for new nuclear plants in hand

and expected 15 more, and it asked Congress for budget increases for personnel to handle the flood.

Across from commission headquarters, in Rockville, Md., workers are now digging a foundation for a \$131 million, 14-story office tower for 1,500 employees to handle an anticipated flood of applications. But many of the proposed reactors are fading.

The four projects identified by the Energy Department after the 2005 act as the strongest candidates to share a \$18.5 billion pool of loan guarantee money underline the difficulties.



Matthew Mazzotta, UAPP "The Buscycle Project" Funded in part by the Council for the Arts at MIT, 2006

Apply for a Council for the Arts Grant!
Deadlines: Friday, February 4 and Friday, April 1
arts.mit.edu/about/council/camit-grants/



MIT OFFICE OF MINORITY EDUCATION

**Need Extra Cash?
Aced Your Classes?
Like Helping People?**

Provide Tutoring
through

Tutorial Services (TSR)

Serve as a Facilitator
for

Seminar XL

Salary

Undergraduates \$16/hour
Graduate Students \$18/hour
Research Scientists/Post Docs Negotiable

Contact the Office of Minority Education for more info | Room 4-113 | 617.253.5010 | web.mit.edu/ome/



Massachusetts Institute of Technology, Office of Minority Education
Building 4-113, 77 Massachusetts Ave, Cambridge 02139
617.253.5010 ome@mit.edu

SLOPE, UAAP, and DUE to finalize plan by February

Students stand by REX; DormCon plans to talk with Norman, Clay about shortening Orientation

Orientation, from Page 1

that the meeting is open to the MIT community and will focus on REX and Orientation. "People should come," Johnson said.

At the meeting, DormCon will be discussing the next steps in approaching the UAAP and the Office of the Dean for Undergraduate Education (DUE) about the proposal to shorten Orientation. According to Johnson, DormCon plans to meet with Clay and Norman.

Yesterday, a group of students protesting the shortening of REX handed out flyers at the class registration tables in DuPont. The flyers stated that "drastic, unjustified cuts to orientation are afoot, threatening everything from dorm culture to academics."

Moving forward with orientation changes

In the coming weeks, the Student Life Orientation Programs and Experiences committee, or SLOPE, will work with the UAAP and DUE to determine a final plan for the reduction of orientation. SLOPE includes representatives from DormCon, UA, FSILGs, and SaveTFP.

"I believe communication by all stakeholders is very important and I am committed to it," Hastings said in an e-mail interview with *The Tech*. Hastings advised students to address any concerns they may have with the proposed changes to their SLOPE representatives.

According to Norman, the UAAP and DUE are working on a schedule for all administration-run events, including the Advanced Standing Exams, the Math Diagnostics Test, and Convocation. The remaining blocks of free time will be dedicated to student-run activities, including REX.

According to Hastings, the UAAP has been conducting background studies to form the proposal, including meetings with a faculty advisory committee, DSL, International Students Office, Housemasters, MIT Medical, DUE, and the UA emergency meeting.

Students voiced concern that by reducing orientation by two days, less time would be available for official REX activities.

Reasoning behind the change

Hastings acknowledged that shortening Orientation will "save resources" for MIT. However, he identified the recommendations of the 2006 Task Force on the Educational Commons Subcommittee as the main catalyst behind the proposed reduction of Orientation.

In its final report, the task force recommended that "the Chancellor should convene a faculty committee to examine first-year orientation and ensure a more equal balance among student life, academics, and research. As part of this effort, consideration should be given to the impact of the new pre-orientation first-year programs and how they contribute to the important intellectual goals of first-year orientation."

In the 2008 Educational Commons Subcommittee Final Report, there was no mention of reviewing, improving, or changing orientation. The Institute-Wide Planning Task Force's Final Report also did not recommend shortening Orientation.

Norman said the decision to shorten Orientation was based on a multitude of reasons, including recommendations from the Task Force on the Educational Commons Subcommittee and the Institute-Wide Planning Task Force.

In response to the Institute budget cuts, the DUE formed the Working Group on First Year Programs, which recommended the reduction of Orientation by three days. Hastings said this idea was "concurrent" with the ideas presented by the task force.

"Given we already have the longest orientation period among our peers (including the pre-orientation programs), it made most sense to look at reducing the total amount of time," Hastings said.

Students stress importance of REX

On Jan. 15, Modi, UA Vice President Sammi G. Wyman '11, Norman, and Associate Dean of the UAAP Elizabeth C. Young met to discuss how to present the proposal to MIT students.

"We jointly decided that a special meeting of the Senate would be a good way to understand the

changes and would provide a structure for giving feedback," Modi said to *The Tech*.

He praised Norman for being candid about the issue. "It's good having someone who is so up-front," Modi said.

Norman acknowledged that students are upset about the changes, but added, "We have their [students] best interest in mind."

Johnson met briefly with Norman on Monday, Jan. 24. According to Johnson, Norman said that the events and purpose of REX would remain untouched. At that time Johnson did not think major changes could happen to REX.

Johnson showed concern over the possibility of REX being shortened. "Choosing a dorm is one of the most important decisions students will make during their four years here since it affects them both academically and socially," Johnson said.

Norman also believes that REX is an important asset to Orientation. "Freshman need to find a community where they feel they belong," Norman said.

In the past, Johnson acted as a REX chair and was able to see first-hand how greatly the event impacted students. "[REX is] a great opportunity to learn about the cultures instead of relying on the stereotypes," Johnson said.

Alexander A. Penn '12, incoming president of Burton Conner, also expressed concern over REX being shortened. "Twenty-four hours isn't enough time to get to know people and figure out if you want to live with them for the next four years."

Penn believes that REX is an essential part of choosing a residence because it allows freshmen to meet upperclassmen in the dorms. "It is hard to get to know a dorm through i3 videos and pamphlets."

Last year, 1,068 freshmen participated in REX. About 250, or 23.4 percent, of those freshmen entered the readjustment lottery, and approximately 50 percent of those who entered the lottery moved to a new dorm.

This past REX, more than 250 events were registered for REX. From Saturday to Monday on that weekend, approximately 58 events were held each day.

Freshman orientation through the years

September 1998

Task Force on Student Life and Learning Final Report

"Yet MIT lacks an effective orientation for all segments of the community. In general, undergraduate **orientation** concentrates too heavily on living group selection: the way undergraduates are asked to make immediate choices about living arrangements obscures larger choices and more important values. By and large, the current system of undergraduate orientation detracts from the sense of an overall community at MIT, and discourages faculty-student interaction."

October 2006

Task Force on the Undergraduate Educational Commons Final Report

"The Chancellor should convene a faculty committee to examine first-year **orientation** and ensure a more equal balance among student life, academics, and research. As part of this effort, consideration should be given to the impact of the new pre-orientation first-year programs and how they contribute to the important intellectual goals of first-year orientation."

October 2006

UA Summary Report on Student Orientation Survey

Based on feedback from 650 students, the UA recommended to, "place emphasis on **orientation** events containing dynamic student-generated content."

2008-2009

DUE Report to the President

"Early in 2009, three DUE working groups were formed to look for specific, cross-cutting, actionable recommendations within the purview of DUE that could save or raise money without compromising our mission or quality. DUE office heads cochaired the groups, which focused on (1) the first-year experience (i.e., freshman year programs and resources, including **orientation**..."

September 2009

DUE Working Group on the First Year Programs

"Reduce freshman **orientation** from six days to three days - While this recommendation makes sense, implementation could take several years. Several stakeholder groups will need to be involved in the planning, taking into account interlinked activities such as Residential Exploration and the Advanced Standing Exams which freshmen take. Preliminary discussions with faculty about the Advanced Standing Exams are scheduled for late Fall."

December 2009

The Tech Editorial Response

"The **orientation** planning committee will soon be evaluating options for making Orientation cheaper as MIT contends with an Institute-wide budget crunch. Some measures have been suggested that have potential to significantly detract from the freshman **orientation** experience — including cutting the length of **orientation** in half."

2009-2010

DUE Report to the President

"Develop strategies and proposals for significantly reducing the FPOP and **orientation** period, including prioritizing programming, identifying competing priorities, engaging key stakeholders in the discussion and moving to consensus on a new **orientation** model for fall 2012."

January 25, 2010

Dean Julie B. Norman at the UA Emergency Meeting

"We need not only to think about what potential changes but also what should be accomplished during **orientation**. We have stepped back to think about what an Orientation should include. Some preliminary steps have been taken, as the Chancellor has proceeded with the conversation around the review of **orientation** and shortening it."

January 31, 2010

Letter from Dean Daniel E. Hastings in response to *The Tech*'s article on REX changes

"We have one of the longest **orientations** in the country among our peers and many faculty feel the freshmen start the term too tired. Freshmen report too much free time. In order to give a specific target, the Chancellor suggested looking at how we can shorten **orientation** by approximately two days. Reducing orientation by this time does not translate to the full impact being on REX."

Epsilon Theta
Coed Independent Living Group

Join us for Rush!
1/19 - 2/6

web.mit.edu/thetans/www/rush

Come Home for College

Know something important we should write about?
(We probably don't know about it.)

Let us know.

news@tech.mit.edu

January 30, 2010

Dorm Presidents Letter to Clay in response to proposed REX changes

"We ask two things. First, we ask for the restoration of a full REX to the proposed schedule, as a critical part of our uniquely supportive housing system. Second, as we stand to gain or lose more than anyone else on the issue, we ask to be involved in any future discussions of **orientation**."

Royal Bengal

Boston's only authentic Bengali Cuisine restaurant

Open Daily Except Monday
11:30 am – 11:30 pm
Lunch Buffet \$7.95
Reasonably Priced Dinners

313 Mass. Ave., Cambridge
(617) 491-1988
T: Red Line, Bus #1 – Central Square

10% Discount on \$15
(or more) order with MIT ID.

Free delivery for orders over \$10.
Take-out, platters, and catering available.
<http://www.royalbengalrestaurant.com/>

Particle Physicists

A 2005 Particle Mass Power Law based on PDG Data
Anticipated the QM 2010
Lightest Up Quark Mass (m_p)
Within QM Error Limits

Using a NEW Conic Vortex Microquantum (m_c)

$$m_p = \sum m_c N^5 \left[\frac{n_{\pm}}{n} + \frac{n_0}{an} \right]$$

where n_{\pm} = number of charged pairs of component microquanta
 n_0 = number of neutral pairs of component microquanta
 N = number of microquanta

See www.electron-particlephysics.org
(Papers 1-4, etc.)

SPERM DONORS

Earn up to
\$1200 per month

Invest minimal time

Make a real difference in the lives of families

Receive free health and genetic screenings

APPLY ONLINE:

SPERMBANK.com

- convenient Cambridge location

bigwords.com™

We don't sell textbooks.
We find the cheapest ones for you.

(actual e-mail)

"I saved \$00000 much money on textbooks by using BIGWORDS.com!
My textbooks would have been well over \$500 just from my researching multiple sites, but BIGWORDS saved me time and money. I went to one site, bought all my books, and only paid around \$200!"

- Chandler from Georgia Institute of Technology

BE SMARTER

35%-45% cheaper than other online stores on average*

50% cheaper than bookstores on average*

Saves \$225 on average multi-item textbook orders*

* BIGWORDS lowest price vs. average lowest price from each online store.
** BIGWORDS lowest price with shipping vs. retail without shipping.

BW-01 TEXTBOOK AQUISITION UNIT

BW83

Can you beat this drawing?
Join Illustrators at The Tech!

E-mail join@tech.mit.edu

**CUSTOM PRINTED & EMBROIDERED
T-SHIRTS
SWEATSHIRTS - POLOS - HATS & MORE!**

ph - 617-625-3335

email - info@qrsts.com

www.qrsts.com

Somerville, MA

Bose is pleased to offer special savings for all students, employees and retirees of M.I.T.

Receive savings on most Bose® products, including the acclaimed Wave® music system, home entertainment systems, headphones, and solutions for today's most popular portable music devices.



Bose Wave® music system – SoundLink®



QuietComfort 15®
Acoustic Noise Cancelling® headphones



Computer MusicMonitor®

Please direct all inquiries to the "M.I.T. Purchase Program."

1-800-298-BOSE
(2673)

BOSE
Better sound through research®

©2010 Bose Corporation. Patent rights issued and/or pending. Delivery is subject to product availability.

LEGAL SEA FOODS

Please use this complimentary gift voucher toward your next visit to our Kendall Square restaurant.

\$5

with the purchase of two (or more) breakfast entrées.

Expires 2/28/11
One Voucher Per Table
Not Valid in Conjunction With Any Other Offer



If it isn't fresh, it isn't Legal!®

800-EAT-FISH www.LEGALSEAFOODS.com

FIVE

with the purchase of two (or more) breakfast entrées.

Breakfast available Monday – Friday, 7am – 10am
No Cash Value
Gratuity and Alcoholic Beverage Not Included

TQRST'S

Printing - Embroidery and More...

part of R.A.W. (Rinnigade Art Works)

2010's defining moments

World Cup, LeBron move made the year

By Nidharshan Anandasivam

A few years from now, we will look back on 2010 and remember only certain moments in the world of sports — those instances of great influence, moments that changed the history and impacted the future of sports.

Here is part one of the unforgettable sports moments of 2010 that I think will withstand the test of time:

1. The World Cup and the Swarm of Bees (at least their sounds)

Spain claimed its first World Cup title by defeating the Dutch in the World Cup Final during the waning minutes of extra time with Andres Iniesta's absolute blast directed towards the side netting. After tremendous expectations and unfortunate heartbreaks in each of the previous World Cups, Spain showed the world it was finally ready to hoist the trophy as the best team in the world.

Opposing teams were made weary and audiences were electrified by the passing execution among the Spanish defenders and midfielders, which was nothing less than impressive, as Spain kept the ball in its possession throughout most of its games. But Spain's victory won't be what fans remember most about the World Cup.

When people think back to the time they watched the 2010 World Cup, some may remember a struggling Italy unable to make it to the knockout stages for a potential repeat championship, or an internally divided France filled with strikes and resignations after the expulsion of their star striker Nicolas Anelka. And others may remember the vicious personality of Argentina's coach and soccer legend Diego Maradona, or the huge upset that resulted from the comeback of the Netherlands over mighty Brazil.

But no one who watched the World Cup at least once could forget the acoustic uniqueness of this event in South Africa. As soon as you turned on the TV and you heard the bees, you knew what it was. Many people argued that the vuvuzelas were a distraction at best, while others saw them as the pride of the host

nation. Either way, the sound of a vuvuzela will forever be associated with and distinguish the 2010 World Cup from all the rest.

2. The Decision ("Wait a minute, he is on that team now?!"

After LeBron James joined the Cleveland Cavaliers as the number one pick in the 2003 NBA Draft, it seemed like he would showcase his talent early, develop into one of the premier players in the league, and create a dynasty in Cleveland, especially considering that he was born and raised in Ohio. The first two happened. But the third, not so much.

No one who watched the World Cup at least once could forget the acoustic uniqueness of this event in South Africa.

Becoming Rookie of the Year in 2003-04 and the NBA's most valuable player in 2008-09 and 2009-10, James transformed into a rising superstar, making the All-NBA team and the All-Star game every year since 2005. But as a free agent in 2010, James decided to leave the adoring fans of Cleveland and join Dwyane Wade and Chris Bosh in Miami. Now, with superstars James and Wade on the same team, it is nearly impossible for defenses to contain the penetration of the Heat into the paint. The athleticism and skill of Wade and James has been shown to be just too much to handle.

LeBron's move to Miami may have resulted from an intense craving for a "better chance" at a championship or a general disgust with the Cavaliers never winning it all. Either way, this single move has had a tremendous impact so far — contributing to the improved versatility of the Miami Heat and the abysmal regular season record of the Cleveland Cavaliers — and it promises to make history in the near future.

Next issue: The Wimbledon Epic and the Saints Come Home.

UPCOMING HOME EVENTS

Wednesday, February 2

Women's Basketball vs. Babson College

7 p.m., Rockwell Cage

SPORTS SHORTS

Yurkerwich sets sights on skiing regionals

MIT Skiing finished their IAP Training Camp with races in giant slalom at Gunstock on Friday and slalom at Blackwater on Saturday.

Highlights from Friday's race include a personal second best USSA points race for Jonathan D. Allen '14, who finished 62nd for the men; a huge personal improvement for Alix M. de Monts '13, who finished 60th for the women; and a top points race for Jennifer L. Hawkin, who finished 66th. MIT's third woman was Sarah J. Laderman '12 in 71st. Jillian R. Reddy '11 did not finish. The men's remaining scorers were Jason D. Pier '13 in 28th, Michael J. Yurkerwich '11 in 50th, and Joshua Walker CME in 65th.

Saturday's race saw a better show-

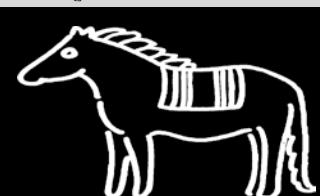
ing from the entire team. Chyleigh J. Harmon '14 led the women's team, finishing 51st. Behind her both Reddy and Hawkin had personal best USSA points races, coming in 73rd and 75th, respectively. Rounding out their scoring was Laderman in 77th. De Monts did not finish her second run. For the men's team, Allen and Walker also had personal best race results. They finished 59th and 60th while Pier came in 28th.

Yurkerwich earned another crucial top-25 finish, placing 18th. He is in strong contention for an individual spot at Regionals this season. The results depend on the fifth place team in the league: If the men's team from the University of Massachusetts is able to beat that from the University of Connecticut by a total of two places over the final two upcoming races, Yurkerwich will represent the McConnell Division. (If UConn finishes ahead of UMass, an individual from UMass will go instead.) Yurkerwich will know the results after one more slalom and one more giant slalom, which will be held at Wildcat in New Hampshire this weekend.

—Alexis Dale, Team Representative

Can you beat this drawing?
Join Illustrators at The Tech!

E-mail join@tech.mit.edu



Bill Weihl
Green Energy Czar
Google

CSAIL
MIT COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE LABORATORY

2010-2011 Dertouzos Lecture Series

Date: Thursday, February 3, 2011

Venue: MIT Stata Center, Building 32-123/Kirsch Auditorium

Time: 4:00-5:00pm

Green IT: Myth, Mirage, or Reality?

Abstract: It seems like just about everyone is talking about "Green IT" these days. But what is it? Can IT be "green"? This talk will discuss what Google is doing to make its servers and data centers more sustainable, as well as the prospects for future improvements. It will also touch on ways in which IT can be used to help make the rest of the world more sustainable.

Biography: Bill Weihl is Green Energy Czar at Google, where he leads engineering efforts in renewable energy and energy efficiency, and also manages the company's carbon-neutral commitment. He helped create the RE<C initiative, which is driving rapid innovation in renewable energy technology to make renewable electricity cost-competitive with coal-fired electricity, leveraging internal R&D, research grants, investments in start-ups, and policy work. He led the effort in Google to co-found the Climate Savers Computing Initiative, which has galvanized the industry to accelerate progress in making computing devices more energy efficient (with help from MIT as one of the early members!). His group also developed Google PowerMeter, which is bringing near-real-time energy information to residential consumers.

Dr. Weihl has extensive business and technical experience in high-tech, including ten years as a professor of Computer Science at MIT, five years as a research scientist at Digital's Systems Research Center, and five years as Chief Architect and then CTO of Akamai Technologies. He received his Ph.D. in 1984 from MIT, where he worked as a graduate student on the Argus project in Prof. Liskov's research group. In fall of 2009, he was named one of Time Magazine's 2009 Heroes of the Environment in recognition of the work he and his colleagues are doing at Google.

Hosts: Frans Kaashoek, CSAIL

For more information: www.csail.mit.edu or 617.253.0145

Massachusetts
Institute of
Technology